



#26

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

APPELLANT: Petkovsek EXAMINER: Henderson
SERIAL NO.: 09/322,594 GROUP ART UNIT: 3722
FILING DATE: May 28, 1999 ATTY. DOCKET NO.: USA-P-99-005
INVENTION: "INTEGRAL VARIABLY PRINTED SPECIAL SERVICE MAILING
ASSEMBLY AND A METHOD FOR USING THE SAME"

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APPELLANT'S APPEAL BRIEF TRANSMITTAL LETTER

MADAM:

Appellant submits herewith, in triplicate, Appellant's Appeal Brief in support of the Notice of Appeal filed November 12, 2003. Appellant encloses a check for \$165.00 for submission of this Appeal Brief. Appellant authorizes the Patent Office to charge any fees that may be due and owing or to credit any overpayment to Deposit Account No. 50-0595. A duplicate copy of this sheet is enclosed for this purpose.

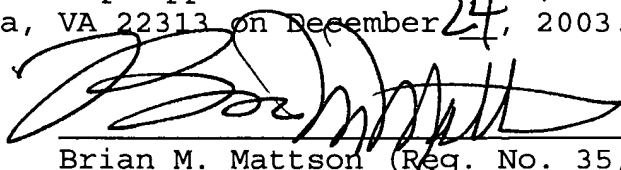
Respectfully submitted,

(Reg. No. 35,018)

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CERTIFICATE OF MAILING

I hereby certify that this **APPEAL BRIEF** with **APPENDIX CONTAINING CLAIMS 1-20, SUPPLEMENTAL APPENDIX CONTAINING EXHIBITS A, B, C, D and E** and check for \$165.00 are being deposited with the United States Postal Service as First Class Mail in an envelope addressed to: Mail Stop Appeal Brief-Patents, Commissioner for Patents, Alexandria, VA 22313 on December ~~21~~²⁴, 2003.

A handwritten signature in black ink, appearing to read "Brian M. Mattson", is written over a horizontal line.

Brian M. Mattson (Reg. No. 35,018)



#26 / Appeal Brief
1/14/04

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APPELLANT'S APPEAL BRIEF

MADAM:

This Appeal Brief is submitted in support of the Notice of Appeal filed on November 12, 2003. The Appeal was taken from the Final Rejection dated June 19, 2003.

I. REAL PARTY IN INTEREST

Glenn Petkovsek is the real party in interest as the inventor of this application. No assignment has been filed or recorded in the U.S. Patent Office regarding ownership interest of this application.

II. RELATED APPEALS AND INTERFERENCES

No other appeals or interferences are known to Appellant or Appellant's legal representative which will directly affect, be directly affected by, or have a bearing on the Board's decision in this appeal.

III. STATUS OF CLAIMS

Claims 1-20 are pending in this patent application. A copy of the claims is appended hereto as the Appendix. Claims 1-20 were finally rejected by the Examiner in a Final Rejection dated June 19, 2003 and are hereby on appeal. The Final Rejection is attached hereto as Exhibit A of the Supplemental Appendix.

IV. STATUS OF AMENDMENTS

All amendments have been entered in this patent application. No amendments to the claims were made after the Final Rejection.

V. SUMMARY OF INVENTION

The present invention provides an integral special service mailing assembly for mailing an article requiring delivery by a special service. Further, the present invention provides a method for using the assembly for mailing articles requiring delivery by a special service. (Page 9, lines 17-22)

The mailing assembly 100 includes a first layer 102 and a second layer 104. The first layer 102 and the second layer 104 are separably attached via an adhesive 106 between selected portions of the two layers 102,104. The first layer 102 has a plurality of separable parts including a return postcard 108 having an integrally formed designator section 110. The return postcard conforms with requirements for, for example, United States Postal Service Form 3811. The designator section 110

includes information necessary to comply with requirements for, for example, United States Postal Service Forms 3804, 3806, 3813, and/or 3856. The designator section 110 heretofore has been implemented as a separate and distinct form apart from the return postcard 108. The unique arrangement of the return postcard 108 with the designator section 110 allows for incorporation of what previously required completion of two forms and subsequent attachment of two forms to, for example, a package to be delivered requiring special services for delivery thereof. As a result, use of the mailing assembly 100 of the claimed invention substantially simplifies and expedites the preparation of such a mailpiece requiring delivery by a special service, such as certified mail, return receipt for merchandise, insured mail, and/or registered mail. (Page 15, lines 21-31 and Page 16, lines 1-15)

The designator section 110 includes a first area 112 that is distinctly colored from a remainder of the area. For example, the color of the first area 112 may be green to designate the generally recognized color for certified mail or may be brown to designate the generally recognized color for return receipt for merchandise. Within the first area 112, wording areas 114, 116 may be provided to specifically denote the type of special service for which the mailing assembly is to be

implemented. An article identifying number area 118 is provided within the designator section 110 to provide, preferably, a machine readable number associated with the mailpiece. This is particularly useful for tracking of the mailpiece before, during and after delivery by the special service. (Page 16, lines 16-31)

A special instruction area 120 is also incorporated within the designator section 110. Both the article identifying number area 118 and the special instruction area 120 have a distinctly colored background to improve the machine readability of the information within these areas. The special instruction area 120 may include, for example, specific instructions such as "RESTRICTED DELIVERY", "ADDRESSEE'S ADDRESS REQUESTED", and/or "RETURN RECEIPT REQUESTED". The return postcard 108 includes other information generally required within specific sections, such as sender information area 122, article addressee area 124, recipient name area 126, recipient signature area 128, date received area 130, machine readable document control area 132, and addressee address area 134. (Page 17, lines 1-16)

On each side of the return postcard 128 are anchor portions 136,138. The anchor portions 136,138 are separable from the return postcard 128 by perforated tear lines 140,142, respectively. The anchor portions 136,138 may also be printed

with variable information or pre-printed information relating to the mail handling or information of a general nature. As shown in the anchor portion 136, an article identifying number area 144 is provided that may include a machine readable article identifying number related to the special delivery of the mailpiece for which the mailing assembly is used. The article identifying number area 144 may be implemented as a removable label from within the anchor portion 136 separable therefrom by die-cut lines, and/or score lines. The anchor portions 136,138 are removably secured to the second layer 104 via the adhesive 106. (Page 17, lines 17-31 and Page 18, lines 1 and 2)

An auxiliary label 146 may be provided and implemented in a number of fashions. For example, the auxiliary label 146 may act as a mailing label, and/or a return address label. The auxiliary label 146 may be separable from a remainder of the mailing assembly 100 via a score line 148. Alternatively, the score line 148 may be implemented as a perforated tear line and/or die-cut lines. (Page 18, lines 3-10)

The mailing assembly 100 is attached to a mailpiece 150 by removing the mail assembly 100 from the second layer 104 and attachment of the anchor portions 136,138 using the adhesive 106 on a back side of the anchor portions 136,138 for attachment to the mailpiece 150. The return postcard 108 is separable from the

anchor portions 136,138 following delivery of the mailpiece 150 to, for example, confirm receipt of delivery of the mailpiece 150. The auxiliary label 146 is incorporated as a return address label. Alternatively, the auxiliary label 146 may be used as an addressee's label and incorporated in the area generally designated at 152. (Page 18, lines 15-28)

VI. ISSUES

1. Would Claims 1-15 have been obvious under 35 U.S.C. §103(a) to one having ordinary skill in the art at the time of Appellant's invention over *Petkovsek* (U.S. Patent No. 5,697,648) in view of *Schwan et al.* (U.S. Patent No. 5,524,934)? See *Petkovsek* (U.S. Patent No. 5,697,648) attached as Exhibit B of the Supplemental Appendix and *Schwan et al.* (U.S. Patent No. 5,524,934) attached as Exhibit C of the Supplemental Appendix.

2. Would Claims 16-20 have been obvious under 35 U.S.C. §103(a) to one having ordinary skill in the art at the time of Appellant's invention over *Walz* (U.S. Patent No. 5,664,725) in view of *Popat et al.* (U.S. Patent No. 6,001,209)? See *Walz* (U.S. Patent No. 5,664,725) attached as Exhibit D of the Supplemental Appendix and *Popat et al.* (U.S. Patent No. 6,001,209) attached as Exhibit E of the Supplemental Appendix.

VII. GROUPING OF CLAIMS

Appellant argues for the patentability of independent Claims

1, 13 and 16 separately and apart from one another. Appellant argues for the patentability of dependent Claims 2-12, 14, 15 and 17-20 separately and apart from the independent claims from which Claims 2-12, 14, 15 and 17-20 depend.

VIII. ARGUMENT

The invention as defined in independent Claim 1 requires a special service mailing assembly having a backing sheet and a first mailing form removably attached to the backing sheet by an adhesive. The first mailing form includes a first return postcard and a first designator section contained within first exterior sides that define the first return postcard. Further, the designator section has an area to denote the type of special service for which the assembly is implemented and a tracking area for tracking the mailpiece. Still further, the first designator section has a color corresponding to one of a plurality of special services for delivery of a mailpiece wherein the color is different for each one of the plurality of special services. Additionally, Claim 1 requires a second mailing form removably attached to the first mailing form wherein the second mailing form is removably attached to the backing sheet by the adhesive. Moreover, the second mailing form includes a second return postcard and a second designator section indicative of the special service contained within second exterior sides that define the second return postcard.

Independent Claim 13 requires a method for preparing a mailpiece for delivery of the mailpiece by a special service having the steps of providing a backing sheet and providing a first mailing form including a first return postcard removably attached to the backing sheet. The first return postcard is integrally formed with a first special service designation section. The designation section has an area for receiving instructions regarding the delivery, type of special service and an identifying number of the mailpiece by the special service. The first special designation section is completely within exterior sides that define the first postcard. Additionally, Claim 13 requires the step of providing an area within the return postcard wherein variable information is printed. Further, Claim 13 requires the step of providing a second mailing form including a second return postcard removably attached to the backing sheet. The second return postcard is integrally formed with a second special designation section. The second special designation section is completely within exterior sides that define the second postcard. Still further, Claim 13 requires the step of printing information relating to the special service delivery of the mailpiece on the area within the return postcard. Moreover, Claim 13 requires the steps of removing the first mailing form from the backing sheet and attaching the first mailing form to the mailpiece to effect

delivery of the mailpiece by the special service.

Independent Claim 16 requires a mailing assembly for preparing a mailpiece for delivery by a special service having a first mailing form with a first return postcard and a first anchor portion removably attached to the first return postcard. The first anchor portion has an adhesive on a backside of the first anchor portion and the first return postcard has no adhesive. Additionally, Claim 16 requires a first backing strip received over the adhesive on the backside of the first anchor portion. Further, Claim 16 requires a second mailing form having a second return postcard and a second anchor portion removably attached to the second return postcard. The second anchor portion has the adhesive on a backside of the second anchor portion and the second return postcard has no adhesive. Still further, Claim 16 requires a second backing strip received over the adhesive on the backside of the second anchor portion. Moreover, Claim 16 requires a first designator section indicative of a special service contained within exterior sides of the first return postcard. The first designator identifies the special service as one of registered mail, certified mail, COD, insured mail and return receipt for merchandise.

**A. THE CITED REFERENCES AND REJECTIONS
OF CLAIMS 1-15**

Claims 1-15 stand rejected under 35 U.S.C. §103(a) as being

unpatentable over *Petkovsek* (U.S. Patent No. 5,697,648) in view of *Schwan et al.* (U.S. Patent No. 5,524,934).

In the Final Rejection, the Examiner stated:

Petkovsek discloses in Fig. 1, 2 and 6, a mailing assembly and a method for preparing a mailpiece comprising a backing sheet (11), first and second mailing forms (10a and 10b) removably attached to the backing sheet by an adhesive (Col. 6, lines 21-25) and separable by a tear line (60) wherein the forms includes a first return postcard (18) integrally formed with a designator section (20, 24A, and 26) indicative of a special service (Col. 4, lines 10-14 and 29-31) having an area consisting of a machine readable code (24 for tracking the mailpiece), an identifying number (26A), an area for receiving instructions (20), and being distinctly colored (Col. 4, lines 40-41) and contained within the first exterior sides (right of perforated line 29a, and left of perforated line 33a) that defines the postcard; wherein the first mailing form (10a) is removably attached (60) to the second mailing form (10b); wherein the second mailing form (Fig. 6) has a second return postcard (18b) integrally formed with a second designator section which is contained within the second exterior sides of the second return postcard; a first anchor portion (28) extending outside one of the exterior sides (33a) of the first return postcard, wherein the first anchor portion has adhesive (48) on the backside (Fig. 2), is removably attached to the postcard via a tear line (33) a removable label section (30) attached to the first anchor portion (28) via a tear line (32), a third designator section (36) contained within the first anchor, and a second anchor portion (27) removably attached to the return postcard by a tear line (29).

However, *Petkovsek* does not disclose: a designator section having a color corresponding to one of a plurality of special services, wherein the color is different for each of the special services.

Schwan et al. discloses in Fig. 3, a record in the form of a label assembly (Col. 1, lines 10 and 11; and Col. 7, lines 14-16) having selected portions for forming areas of a plurality of different colors,

wherein coating of colorless color formers and developers are initially combined (upon application of an imaging force) to form colored visible area (Fig. 3). The coating (color formers and color developers) can be applied in selected areas on the label, and when combined can form blocks of background color(s) (Col. 4, lines 58-61) wherein the label can be used for mailing labels in which different colors are activated to designate the method (special services) of shipment.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify *Petkovsek's* label to include a label having designated areas, wherein each area has a color corresponding to a shipment method (special services) as taught by *Schwan et al.* for the purpose of providing a means of emphasizing different categories of information on a label assembly.

(See Final Rejection, pages 3 and 4 of Exhibit A of the Supplemental Appendix.)

B. PETKOVSEK OR SCHWAN ET AL., TAKEN SINGLY OR IN COMBINATION, DO NOT TEACH OR SUGGEST THE INVENTION DEFINED IN CLAIMS 1-15, AND IT WOULD NOT HAVE BEEN OBVIOUS TO COMBINE THEM BY ONE HAVING ORDINARY SKILL IN THE ART AT THE TIME OF THE INVENTION

With respect to the rejection of Claims 1-15 under 35 U.S.C. §103(a) as being unpatentable over *Petkovsek* in view of *Schwan et al.*, Appellant respectfully submits that the claims distinctly define the present invention from *Petkovsek* and *Schwan et al.*, taken singly or in combination, for the reasons that follow.

Petkovsek merely teaches a mailing assembly formed from a single sheet to provide a label and a return postcard for use in mailing an item requiring special services. Further, *Petkovsek*

teaches that "the return receipt postcard has a number of sub-sections requiring completion by the sender prior to mailing". (See *Petkovsek*, Col. 4, lines 31-33.) Moreover, *Petkovsek* teaches that "the sub-section may have a back-ground color that contrasts with the color of the return receipt postcard so as to simplify the reading of the machine-readable code in the sub-section". (See *Petkovsek*, Col. 4, lines 36-39.)

Schwan et al. merely teach a sheet containing surface coatings of selected color formers and color developers which, when subjected to heat or pressure, combine to form different colored areas on the sheet. Further, *Schwan et al.* merely teach a business record in which different selected areas may be activated to form colored areas. Still further, *Schwan et al.* teach that "the coatings may be applied in selected areas which can form blocks of background color, or they may be applied so as to form images, symbols, stripes borders, and the like when passed through a thermal printer". (See *Schwan et al.*, Col. 4, lines 57-61.) Moreover, *Schwan et al.* merely teach that "the invention could also be used for shipping labels in which different colors are activated to designate the method or location of shipment". (See *Schwan et al.*, Col. 7, lines 14-17.)

On the contrary, Claim 1 requires a special mailing assembly having a first mailing form with a designator section which has

an area to denote the type of special service for which the assembly is implemented. Further, Claim 1 requires the first designator section has a color corresponding to one of a plurality of special services for delivery of a mailpiece wherein the color is different for each one of the plurality of special services. Moreover, Claim 1 requires a second mailing form having a second designator section indicative of the special service contained within second exterior sides that define the second return postcard.

The Examiner admits that "Petkovsek does not disclose a designator section having a color corresponding to one of a plurality of special services wherein the color is different for each on of the special services". (See Final Rejection, page 3 of Exhibit A of the Supplemental Appendix.) The Examiner alleges *Schwan et al.* teaches a record in the form of a label assembly having selected portions for forming areas of a plurality of different colors, wherein coating of colorless color formers and developers are initially combined to form colored visible area. Further, the Examiner alleges *Schwan et al.* teaches that the coating can be applied in selected areas on the label, and when combined can form blocks of background color(s) wherein the label can be used for mailing labels in which different colors are activated to designate the method of

shipment. (See Final Rejection, page 3 of Exhibit A of the Supplemental Appendix.)

*Tangle by
first ref* { Nowhere does *Schwan et al.* teach or suggest a special service mailing assembly having a backing sheet and a first mailing form removably attached to the backing sheet by an adhesive wherein the first mailing form includes a first return postcard and a first designator section contained within first exterior sides as alleged by the Examiner. Moreover, nowhere does *Schwan et al.* teach or suggest a first designator section which has a color corresponding to one of a plurality of special services for delivery of a mailpiece wherein the color is different for each one of the plurality of special services as alleged by the Examiner.

Schwan {

Clearly, neither *Petkovsek* nor *Schwan et al.*, taken singly or in combination, teach or suggest a special service mailing assembly having a designator section which has an area to denote the type of special service for which the assembly is implemented as required by Claim 1. Additionally, neither *Petkovsek* nor *Schwan et al.*, taken singly or in combination, teach or suggest a special service mailing assembly having a first designator section which has a color corresponding to one of the plurality of special services for delivery of a mailpiece as required by Claim 1. Moreover, neither *Petkovsek* nor *Schwan*

et al., taken singly or in combination, teach or suggest a special service mailing assembly having a first designator section which has a color which is different for each one of the plurality of special services as required by Claim 1. Petkovsek merely teaches that "other sections, as well, may include similar color-contrasting portions within the return receipt postcard". (See Petkovsek, Col. 4, lines 39-41.) Schwan et al. merely teach a "business record such as a form, label, or tag having coatings of initially colorless color formers and color developers on selected areas which may be activated to produce a selected color or colors when imaged in a thermal printer or subjected to pressure or impact." (See Schwan et al., column 2, lines 17-21.) Therefore, neither Petkovsek nor Schwan et al., taken singly or in combination, teach or suggest an assembly having a first designator section which has an area to denote the type of special service for which the assembly is implemented and a color corresponding to one of a plurality of special services for delivery of a mailpiece wherein the color is different for each one of the plurality of special services as required by Claim 1.

Claim 13 requires a method for preparing a mailpiece for delivery of the mailpiece by a special service having the step of providing a first mailing form including a first return

postcard removably attached to the backing sheet wherein the first return postcard is integrally formed with a first special service designation section. The designation section has an area for receiving instructions regarding the delivery, type of special service and an identifying number of the mailpiece by the special service. The first special designation section is completely within exterior sides that define the first postcard. Additionally, Claim 13 requires a step of providing a second mailing form including a second return postcard removably attached to the backing sheet. The second return postcard is integrally formed with a second special designation section wherein the second special designation section is completely within exterior sides that define the second postcard.

Neither *Petkovsek* nor *Schwan et al.*, taken singly or in combination, teach or suggest a method for preparing a mailpiece for delivery by a special service having the step of providing a first mailing form including a first return postcard removably attached to the backing sheet wherein the first return postcard is integrally formed with a first special service designation section as required by Claim 13. Further, neither *Petkovsek* nor *Schwan et al.*, taken singly or in combination, teach or suggest a method for preparing a mailpiece for delivery by a special service having a designation section which has an area for

receiving instructions regarding the delivery, type of special service and an identifying number of the mailpiece by the special service as required by Claim 13. Moreover, neither *Petkovsek* nor *Schwan et al.*, taken singly or in combination, teach or suggest a method for preparing a mailpiece for delivery by a special service wherein the first special designation section is completely within exterior sides that define the first postcard as required by Claim 13. Contrary to the assertion of the Patent Office, *Petkovsek* merely teaches a return receipt postcard having a set of instructions for the sender, addressee section and a document control number bar code.

Clearly, neither *Petkovsek* nor *Schwan et al.*, taken singly or in combination, teach or suggest a method for preparing a mailpiece for delivery by a special service having the step of providing a second mailing form including a second return postcard removably attached to the backing sheet wherein the second return postcard is integrally formed with a second special designation section as required by Claim 13. Moreover, neither *Petkovsek* nor *Schwan et al.*, taken singly or in combination, teach or suggest a method for preparing a mailpiece for delivery by a special service having the second special designation section which is completely within exterior sides

that define the second postcard as required by Claim 13.

Piece meal
Moreover, a person of ordinary skill in the art would never have been motivated to combine *Petkovsek* with *Schwan et al.* in the manner suggested by the Patent Office in formulating the rejection under 35 U.S.C. §103(a). Appellant submits that the Patent Office is merely "piece-mealing" references together, providing various teachings and positively defined limitations of Appellant's special service mailing assembly and method for preparing a mailpiece for delivery of the mailpiece by a special service to deprecate the claimed invention. Of course, hindsight reconstruction of Appellant's invention is impermissible. Appellant respectfully submits that Claims 1 and 13 distinctly define the present invention from *Petkovsek* and/or *Schwan et al.*, taken singly or in combination.

With the analysis of the deficiencies of *Petkovsek* and *Schwan et al.* in mind, no reason or suggestion in the evidence of record exists why one of ordinary skill in the art would have been led to combine *Petkovsek* and *Schwan et al.* in the manner suggested by the Patent Office in formulating the rejection under 35 U.S.C. §103. Therefore, *prima facie* obviousness has not been established by the Patent Office as required under 35 U.S.C. §103.

It is submitted that the question under §103 is whether the

totality of the art would collectively suggest the claimed invention to one of ordinary skill in this art. In re Simon, 461 F.2d 1387, 174 USPQ 114 (CCPA 1972).

Motivated?
Appellant further submits that one having ordinary skill in the art at the time of Appellant's invention would never have been motivated to combine *Petkovsek* with *Schwan et al.* in the manner suggested by the Examiner in formulating the rejections under 35 U.S.C. §103(a).

That elements, even distinguishing elements, are disclosed in the art is alone insufficient. It is common to find elements somewhere in the art. Moreover, most, if not all, elements perform their ordained and expected functions. The test is whether the invention as a whole, in light of all the teachings of the references in their entireties, would have been obvious to one of ordinary skill in the art at the time the invention was made. *Connell v. Sears, Roebuck & Co.*, 722 F.2d 1545, 220 USPQ 193 (Fed. Cir. 1983).

Appellant submits that the Examiner has merely located components of Appellant's claimed invention. However, that the art disclosed components of Appellant's claimed invention, either separately or used in other combinations, is insufficient. A teaching, suggestion, or incentive must exist to make the combination made by Appellant. *Interconnect*

Planning Corp. v. Feil, 774 F. 2d 1132, 1143, 227 USPQ 543, 551 (Fed. Cir. 1988).

Even assuming that one having ordinary skill in the art could somehow have combined *Petkovsek* and *Schwan et al.* as set forth by the Examiner, the resultant combination still lacks the critical elements and steps positively recited in Claims 1 and 13, respectively.

In view of the foregoing, Appellant submits that the rejection of Claims 1 and 13 under 35 U.S.C. §103(a) is improper.

Dependent Claim 2 further requires the special service assembly to have a first anchor portion extending outside one of the first exterior sides of the first return postcard wherein the first anchor portion has the adhesive on a back side of the first anchor portion. Clearly, neither *Petkovsek* nor *Schwan et al.*, taken singly or in combination, teach or suggest a special service mailing assembly having a designator section which has an area to denote the type of special service for which the assembly is implemented as required by Claim 2. Additionally, neither *Petkovsek* nor *Schwan et al.*, taken singly or in combination, teach or suggest a special service mailing assembly having a first designator section which has a color corresponding to one of the plurality of special services for delivery of a mailpiece as required by Claim 2. Further,

neither *Petkovsek* nor *Schwan et al.*, taken singly or in combination, teach or suggest a special service mailing assembly having a first designator section which has a color which is different for each one of the plurality of special services as required by Claim 2. Therefore, the invention defined in Claim 2 would not have been obvious to one of ordinary skill in the art at the time of Appellant's invention in view of *Petkovsek* and *Schwan et al.*, taken singly or in combination. Accordingly, the rejection of Claim 2 under 35 U.S.C. §103(a) in view of *Petkovsek* and *Schwan et al.* is improper.

Dependent Claim 3 further requires the special service assembly to have a removable label section within the first anchor portion removably attached to the first anchor portion. Clearly, neither *Petkovsek* nor *Schwan et al.*, taken singly or in combination, teach or suggest a special service mailing assembly having a designator section which has an area to denote the type of special service for which the assembly is implemented as required by Claim 3. Additionally, neither *Petkovsek* nor *Schwan et al.*, taken singly or in combination, teach or suggest a special service mailing assembly having a first designator section which has a color corresponding to one of the plurality of special services for delivery of a mailpiece as required by Claim 3. Further, neither *Petkovsek* nor *Schwan et al.*, taken singly or in combination, teach or suggest a special service

mailing assembly having a first designator section which has a color which is different for each one of the plurality of special services as required by Claim 3. Therefore, the invention defined in Claim 3 would not have been obvious to one of ordinary skill in the art at the time of Appellant's invention in view of *Petkovsek* and *Schwan et al*, taken singly or in combination. Accordingly, the rejection of Claim 3 under 35 U.S.C. §103(a) in view of *Petkovsek* and *Schwan et al*. is improper.

Dependent Claim 4 further requires the special service assembly to have the first anchor portion which is removably attached to the first return postcard via a tear line. Clearly, neither *Petkovsek* nor *Schwan et al.*, taken singly or in combination, teach or suggest a special service mailing assembly having a designator section which has an area to denote the type of special service for which the assembly is implemented as required by Claim 4. Additionally, neither *Petkovsek* nor *Schwan et al.*, taken singly or in combination, teach or suggest a special service mailing assembly having a first designator section which has a color corresponding to one of the plurality of special services for delivery of a mailpiece as required by Claim 4. Further, neither *Petkovsek* nor *Schwan et al.*, taken singly or in combination, teach or suggest a special service mailing assembly having a first designator section which has a

color which is different for each one of the plurality of special services as required by Claim 4. Therefore, the invention defined in Claim 4 would not have been obvious to one of ordinary skill in the art at the time of Appellant's invention in view of *Petkovsek* and *Schwan et al*, taken singly or in combination. Accordingly, the rejection of Claim 4 under 35 U.S.C. §103(a) in view of *Petkovsek* and *Schwan et al*. is improper.

Dependent Claim 5 further requires the special service assembly to have a third designator section contained within the first anchor portion. Clearly, neither *Petkovsek* nor *Schwan et al.*, taken singly or in combination, teach or suggest a special service mailing assembly having a designator section which has an area to denote the type of special service for which the assembly is implemented as required by Claim 5. Additionally, neither *Petkovsek* nor *Schwan et al.*, taken singly or in combination, teach or suggest a special service mailing assembly having a first designator section which has a color corresponding to one of the plurality of special services for delivery of a mailpiece as required by Claim 5. Further, neither *Petkovsek* nor *Schwan et al.*, taken singly or in combination, teach or suggest a special service mailing assembly having a first designator section which has a color which is different for each one of the plurality of special services as

required by Claim 5. Therefore, the invention defined in Claim 5 would not have been obvious to one of ordinary skill in the art at the time of Appellant's invention in view of *Petkovsek* and *Schwan et al.* Accordingly, the rejection of Claim 5 under 35 U.S.C. §103(a) in view of *Petkovsek* and *Schwan et al.* is improper.

Dependent Claim 6 further requires the special service assembly to have a tear line separating the removable label section within the first anchor portion. Clearly, neither *Petkovsek* nor *Schwan et al.*, taken singly or in combination, teach or suggest a special service mailing assembly having a designator section which has an area to denote the type of special service for which the assembly is implemented as required by Claim 6. Additionally, neither *Petkovsek* nor *Schwan et al.*, taken singly or in combination, teach or suggest a special service mailing assembly having a first designator section which has a color corresponding to one of the plurality of special services for delivery of a mailpiece as required by Claim 6. Further, neither *Petkovsek* nor *Schwan et al.*, taken singly or in combination, teach or suggest a special service mailing assembly having a first designator section which has a color which is different for each one of the plurality of special services as required by Claim 6. Therefore, the invention defined in Claim 6 would not have been obvious to one of ordinary skill in the art at the time of Appellant's

invention in view of *Petkovsek* and *Schwan et al*, taken singly or in combination. Accordingly, the rejection of Claim 6 under 35 U.S.C. §103(a) in view of *Petkovsek* and *Schwan et al*. is improper.

Dependent Claim 7 further requires the special service assembly to have an area within the first designator section having a machine readable code. Clearly, neither *Petkovsek* nor *Schwan et al.*, taken singly or in combination, teach or suggest a special service mailing assembly having a designator section which has an area to denote the type of special service for which the assembly is implemented as required by Claim 7. Additionally, neither *Petkovsek* nor *Schwan et al.*, taken singly or in combination, teach or suggest a special service mailing assembly having a first designator section which has a color corresponding to one of the plurality of special services for delivery of a mailpiece as required by Claim 7. Further, neither *Petkovsek* nor *Schwan et al.*, taken singly or in combination, teach or suggest a special service mailing assembly having a first designator section which has a color which is different for each one of the plurality of special services as required by Claim 7. Therefore, the invention defined in Claim 7 would not have been obvious to one of ordinary skill in the art at the time of Appellant's invention in view of *Petkovsek* and *Schwan et al*, taken singly or in combination. Accordingly, the rejection of Claim 7 under 35 U.S.C. §103(a) in view of

Petkovsek and Schwan et al. is improper.

Dependent Claim 8 further requires the special service assembly to have the first designator section which is distinctly colored from a remainder of the first return postcard. Clearly, neither *Petkovsek* nor *Schwan et al.*, taken singly or in combination, teach or suggest a special service mailing assembly having a designator section which has an area to denote the type of special service for which the assembly is implemented as required by Claim 8. Additionally, neither *Petkovsek* nor *Schwan et al.*, taken singly or in combination, teach or suggest a special service mailing assembly having a first designator section which has a color corresponding to one of the plurality of special services for delivery of a mailpiece as required by Claim 8. Further, neither *Petkovsek* nor *Schwan et al.*, taken singly or in combination, teach or suggest a special service mailing assembly having a first designator section which has a color which is different for each one of the plurality of special services as required by Claim 8. Therefore, the invention defined in Claim 8 would not have been obvious to one of ordinary skill in the art at the time of Appellant's invention in view of *Petkovsek* and *Schwan et al.*, taken singly or in combination. Accordingly, the rejection of Claim 8 under 35 U.S.C. §103(a) in view of *Petkovsek* and *Schwan et al.* is improper.

Dependent Claim 9 further requires the special service

assembly to have the special service which includes one of certified mail, registered mail, insured mail, COD, or return receipt for merchandise mail. Clearly, neither *Petkovsek* nor *Schwan et al.*, taken singly or in combination, teach or suggest a special service mailing assembly having a designator section which has an area to denote the type of special service for which the assembly is implemented as required by Claim 9. Additionally, neither *Petkovsek* nor *Schwan et al.*, taken singly or in combination, teach or suggest a special service mailing assembly having a first designator section which has a color corresponding to one of the plurality of special services for delivery of a mailpiece as required by Claim 9. Further, neither *Petkovsek* nor *Schwan et al.*, taken singly or in combination, teach or suggest a special service mailing assembly having a first designator section which has a color which is different for each one of the plurality of special services as required by Claim 9. Therefore, the invention defined in Claim 9 would not have been obvious to one of ordinary skill in the art at the time of Appellant's invention in view of *Petkovsek* and *Schwan et al.*, taken singly or in combination. Accordingly, the rejection of Claim 9 under 35 U.S.C. §103(a) in view of *Petkovsek* and *Schwan et al.* is improper.

Dependent Claim 10 further requires the special service assembly to have a second anchor portion removably attached to the first return postcard outside one of the exterior sides of

the first return postcard wherein a back side of the second anchor portion includes the adhesive on a back side of the second anchor portion. Clearly, neither *Petkovsek* nor *Schwan et al.*, taken singly or in combination, teach or suggest a special service mailing assembly having a designator section which has an area to denote the type of special service for which the assembly is implemented as required by Claim 10. Additionally, neither *Petkovsek* nor *Schwan et al.*, taken singly or in combination, teach or suggest a special service mailing assembly having a first designator section which has a color corresponding to one of the plurality of special services for delivery of a mailpiece as required by Claim 10. Further, neither *Petkovsek* nor *Schwan et al.*, taken singly or in combination, teach or suggest a special service mailing assembly having a first designator section which has a color which is different for each one of the plurality of special services as required by Claim 10. Therefore, the invention defined in Claim 10 would not have been obvious to one of ordinary skill in the art at the time of Appellant's invention in view of *Petkovsek* and *Schwan et al.*, taken singly or in combination. Accordingly, the rejection of Claim 10 under 35 U.S.C. §103(a) in view of *Petkovsek* and *Schwan et al.* is improper.

Dependent Claim 11 further requires the special service assembly to have a tear line separating the second anchor portion from a remainder of the first return postcard. Clearly,

neither *Petkovsek* nor *Schwan et al.*, taken singly or in combination, teach or suggest a special service mailing assembly having a designator section which has an area to denote the type of special service for which the assembly is implemented as required by Claim 11. Additionally, neither *Petkovsek* nor *Schwan et al.*, taken singly or in combination, teach or suggest a special service mailing assembly having a first designator section which has a color corresponding to one of the plurality of special services for delivery of a mailpiece as required by Claim 11. Further, neither *Petkovsek* nor *Schwan et al.*, taken singly or in combination, teach or suggest a special service mailing assembly having a first designator section which has a color which is different for each one of the plurality of special services as required by Claim 11. Therefore, the invention defined in Claim 11 would not have been obvious to one of ordinary skill in the art at the time of Appellant's invention in view of *Petkovsek* and *Schwan et al.*, taken singly or in combination. Accordingly, the rejection of Claim 11 under 35 U.S.C. §103(a) in view of *Petkovsek* and *Schwan et al.* is improper.

Dependent Claim 12 further requires the special service assembly to have a tear line separating the first mailing form from the second mailing form. Clearly, neither *Petkovsek* nor *Schwan et al.*, taken singly or in combination, teach or suggest a special service mailing assembly having a designator section

which has an area to denote the type of special service for which the assembly is implemented as required by Claim 12. Additionally, neither *Petkovsek* nor *Schwan et al.*, taken singly or in combination, teach or suggest a special service mailing assembly having a first designator section which has a color corresponding to one of the plurality of special services for delivery of a mailpiece as required by Claim 12. Further, neither *Petkovsek* nor *Schwan et al.*, taken singly or in combination, teach or suggest a special service mailing assembly having a first designator section which has a color which is different for each one of the plurality of special services as required by Claim 12. Therefore, the invention defined in Claim 12 would not have been obvious to one of ordinary skill in the art at the time of Appellant's invention in view of *Petkovsek* and *Schwan et al.*, taken singly or in combination. Accordingly, the rejection of Claim 12 under 35 U.S.C. §103(a) in view of *Petkovsek* and *Schwan et al.* is improper.

Dependent Claim 14 further requires the method to have a step of providing an anchor portion adjacent to the first return postcard. Clearly, neither *Petkovsek* nor *Schwan et al.*, taken singly or in combination, teach or suggest a method for preparing a mailpiece for delivery by a special service having the step of providing a first mailing form including a first return postcard removably attached to the backing sheet wherein the first return postcard is integrally formed with a first

special service designation section as required by Claim 14. Further, neither *Petkovsek* nor *Schwan et al.*, taken singly or in combination, teach or suggest a method for preparing a mailpiece for delivery by a special service having a designation section which has an area for receiving instructions regarding the delivery, type of special service and an identifying number of the mailpiece by the special service as required by Claim 14. Moreover, neither *Petkovsek* nor *Schwan et al.*, taken singly or in combination, teach or suggest a method for preparing a mailpiece for delivery by a special service wherein the first special designation section is completely within exterior sides that define the first postcard as required by Claim 14. Therefore, Claim 14 would not have been obvious to one of ordinary skill in the art at the time of Appellant's invention in view of *Petkovsek* and *Schwan et al.*, taken singly or in combination.

Moreover, *Petkovsek* actually teaches away from a method having the first special designation section which is completely within the exterior sides that define the first postcard because the assembly teaches that the label is separated from the postcard. Contrary to the assertion of the Examiner, *Petkovsek* merely teaches that "FIG. 1 is a front plan view that generally illustrates an embodiment of an assembly 10 formed from a single sheet 11 to provide both a label 12 and a return postcard 13." Additionally, *Petkovsek* teaches that "the label 12 is, in a

preferred embodiment, a pre-printed label indicative of the special service required for mailing of the article 14." Further, *Petkovsek* teaches that "the pre-printed label 12 includes a special service indicator 15 and a window section 16 in which an article identification number can be printed." Moreover, *Petkovsek* teaches that "the return receipt postcard 13 may include a set of instructions 20 for the sender, as well as an article addressee section 22 for pre-printing the addressee's address." Thus, *Petkovsek* clearly teaches away from a method having the first special designation section which is completely within the exterior sides that define the first postcard as specifically defined in Claim 14. Accordingly, the rejection of Claim 14 under 35 U.S.C. §103(a) in view of *Petkovsek* and *Schwan et al.* is improper.

Dependent Claim 15 further requires the method to have the steps of providing a removable label section as a portion of the anchor portion and removing the removable label section from the anchor portion. Clearly, neither *Petkovsek* nor *Schwan et al.*, taken singly or in combination, teach or suggest a method for preparing a mailpiece for delivery by a special service having the step of providing a first mailing form including a first return postcard removably attached to the backing sheet wherein the first return postcard is integrally formed with a first special service designation section as required by Claim 15. Further, neither *Petkovsek* nor *Schwan et al.*, taken singly or in

combination, teach or suggest a method for preparing a mailpiece for delivery by a special service having a designation section which has an area for receiving instructions regarding the delivery, type of special service and an identifying number of the mailpiece by the special service as required by Claim 15. Moreover, neither *Petkovsek* nor *Schwan et al.*, taken singly or in combination, teach or suggest a method for preparing a mailpiece for delivery by a special service wherein the first special designation section is completely within exterior sides that define the first postcard as required by Claim 15. Therefore, the invention defined in Claim 15 would not have been obvious to one of ordinary skill in the art at the time of Appellant's invention in view of *Petkovsek* and *Schwan et al*, taken singly or in combination.

Moreover, *Petkovsek* actually teaches away from a method having the first special designation section which is completely within the exterior sides that define the first postcard because the assembly teaches that the label is separated from the postcard. Contrary to the assertion of the Examiner, *Petkovsek* merely teaches that "FIG. 1 is a front plan view that generally illustrates an embodiment of an assembly 10 formed from a single sheet 11 to provide both a label 12 and a return postcard 13." Additionally, *Petkovsek* teaches that "the label 12 is, in a preferred embodiment, a pre-printed label indicative of the special service required for mailing of the article 14."

Further, *Petkovsek* teaches that "the pre-printed label 12 includes a special service indicator 15 and a window section 16 in which an article identification number can be printed." Moreover, *Petkovsek* teaches that "the return receipt postcard 13 may include a set of instructions 20 for the sender, as well as an article addressee section 22 for pre-printing the addressee's address." Thus, *Petkovsek* clearly teaches away from a method having the first special designation section which is completely within the exterior sides that define the first postcard as specifically defined in Claim 15. Accordingly, the rejection of Claim 15 under 35 U.S.C. §103(a) in view of *Petkovsek* and *Schwan et al.* is improper.

With respect to the assertion of the Examiner that the label of *Petkovsek* is capable of denoting a special service that includes registered mail, certified mail, COD, return receipt for merchandise, Appellant asserts that the special service mailing assembly as specifically defined in Claim 1 has novel structural differences and is patentably distinct from the label of *Petkovsek*. Moreover, the label of *Petkovsek* does not have a color corresponding to one of a plurality of special services for delivery of a mailpiece wherein the color is different for each one of the plurality of special services as required by Claim 1. Therefore, the special service mailing assembly as defined in Claim 1 has novel structural differences and is patentably distinct from the label of *Petkovsek*.

With respect to the assertion of the Examiner that it would be obvious to program the bar coded area of Petkovsek to receive or transmit instructions regarding the delivery of the mailpiece by a special service, Appellant asserts the method for preparing a mailpiece for delivery by a special service as specifically defined in Claim 13 is patentably distinct from the method of *Petkovsek*. Further, *Petkovsek* does not have the designation section having an area for receiving instructions regarding the delivery, type of special service and an identifying number of the mailpiece by the special service as required by Claim 13. Therefore, the method for preparing a mailpiece for delivery by a special service as defined in Claim 13 is patentably distinct from *Petkovsek*.

In view of the forgoing, the rejection of Claims 1-15 under 35 U.S.C. §103(a) is improper.

**C. THE CITED REFERENCES AND REJECTION
OF CLAIMS 16-20**

Claim 16-20 stand rejected under 35 U.S.C. §103(a) as being unpatentable over *Walz* (U.S. Patent No. 5,664,725) in view of *Popat et al.* (U.S. Patent No. 6,001,209).

In the Final Rejection, the Examiner stated:

Walz discloses in Fig. 1, 4 and 5, an assembly comprising a first form (84) having a first postcard (70), a first anchor portion (58) removably attached to the postcard via a tear line (24), an integrally formed designator section (73) indicative of special services such as restricted delivery which can consist of: certified mail, COD, insured mail, etc. (Col. 4,

lines 45-48), an area (66) contained within the postcard printed with machine readable code (75), and a second form (82) removably attached to the first form by a tear line (20).

However, Walz does not disclose: a second form having a second postcard and a second anchor portion; and a first return postcard having no adhesive.

Popat et al. discloses in Figure 10, an assembly comprising a first form (254a) and a second form (254b), having anchor portions (258, 256, 256c) wherein a tear line (252c) is arranged to separate the first form from the second form.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Walz's assembly to include a multiple form assembly connected by a tear line as taught by Popat et al. for the purpose of printing multiple areas of a sheet without disposing of extra unused paper area and for providing convenience for anyone using an advanced printer.

(See Final Rejection, pages 5 and 6 of Exhibit A of the Supplemental Appendix.)

D. WALZ OR POPAT ET AL., TAKEN SINGLY OR IN COMBINATION, DO NOT TEACH OR SUGGEST THE INVENTION DEFINED IN CLAIMS 16-20, AND IT WOULD NOT HAVE BEEN OBVIOUS TO COMBINE THEM BY ONE HAVING ORDINARY SKILL IN THE ART AT THE TIME OF THE INVENTION

Contrary to the assertions of the Examiner, Walz teaches a multi-part mailing form for use by businesses in mailing items to various customers or clients and in keeping records of such mailings and is particularly related to forms for use in certain specific types of mailing, such as certified and registered mail procedures. Popat et al. merely teach a multi-purpose sheet assembly that may be divided into subsections and a method for printing the subsections in laser printers, ink jet printers and

photocopiers.

However, Claim 16 requires a mailing assembly for preparing a mailpiece for delivery by a special service. The mailing assembly requires a first mailing form having a first return postcard and a first anchor portion removably attached to the first return postcard. The first return postcard to have no adhesive. Further, Claim 16 requires a second mailing form having a second return postcard and a second anchor portion removably attached to the second return postcard. The second return postcard to have no adhesive. Moreover, Claim 16 requires a first designator section indicative of a special service contained within exterior sides of the first return postcard wherein the first designator identifies the special service as one of registered mail, certified mail, COD, insured mail and return receipt for merchandise.

The Examiner admits that *Walz* does not disclose a first postcard having no adhesive and a second form having a second postcard and a second anchor portion. The Examiner alleges *Popat et al.* teaches an assembly, in Fig. 10, comprising a first form and a second form, having anchor portions wherein a tear line is arranged to separate the first form from the second form. (See Final Rejection, page 6 of Exhibit A of the Supplemental Appendix.) Nowhere does *Popat et al.* teach or suggest a mailing assembly for preparing a mailpiece for delivery by a special service having a second form including a

second postcard and a second anchor portion and a first return postcard which has no adhesive as alleged by the Examiner.

Neither *Walz* nor *Popat et al.*, taken singly or in combination, teach or suggest a mailing assembly having a first mailing form with a first return postcard which has no adhesive as required by Claim 16. Additionally, neither *Walz* nor *Popat et al.*, taken singly or in combination, teach or suggest a mailing assembly having a second mailing form with a second return postcard and a second anchor portion removably attached to the second return postcard as required by Claim 16. Further, neither *Walz* nor *Popat et al.*, taken singly or in combination, teach or suggest a mailing assembly having the second anchor portion which has the adhesive on a backside and the second return postcard which has no adhesive as required by Claim 16. Moreover, neither *Walz* nor *Popat et al.*, taken singly or in combination, teach or suggest a mailing assembly having a first designator section indicative of a special service contained within exterior sides of the first return postcard wherein the first designator identifies the special service as one of registered mail, certified mail, COD, insured mail and return receipt for merchandise as required by Claim 16.

Contrary to the assertions of the Examiner, *Popat et al.* merely teach that "FIG. 10 illustrates a sheet of note paper 250 that is subdivided by perforation lines 252a, 252b and 252 into separate notes 252a, b, c and d". (See *Popat et al.*, column 7,

lines 38-40.) Further, *Popat et al.* teach that "adhesive stripes 256a, 256b and 256c provide each of the notes with a top and a bottom adhesive stripe". (See *Popat et al.*, column 7, lines 40-42.) Therefore, neither *Walz* nor *Popat et al.*, taken singly or in combination, teach or suggest a mailing assembly having a first mailing form with a first return postcard which has no adhesive and a second mailing form with a second return postcard which has no adhesive as required by Claim 16.

Moreover, a person of ordinary skill in the art would never have been motivated to combine *Walz* with *Popat et al.* in the manner suggested by the Patent Office in formulating the rejection under 35 U.S.C. §103(a). Appellant submits that the Patent Office is merely "piece-mealing" references together, providing various teachings and positively defined limitations of Appellant's mailing assembly for preparing a mailpiece for delivery by a special service to deprecate the claimed invention. Of course, hindsight reconstruction of Appellant's invention is impermissible. Appellant respectfully submits that Claim 16 distinctly defines the present invention from *Walz* and/or *Popat et al.*, taken singly or in combination.

With the analysis of the deficiencies of *Walz* and *Popat et al.* in mind, as enumerated above, no reason or suggestion in the evidence of record exists why one of ordinary skill in the art at the time of Appellant's invention would have been motivated to combine *Walz* with *Popat et al.* in the manner suggested by the

Patent Office in formulating the rejection under 35 U.S.C. §103(a). Therefore, *prima facie* obviousness has not been established by the Patent Office as required under 35 U.S.C. §103(a).

It is submitted that the question under §103 is whether the totality of the art would collectively suggest the claimed invention to one of ordinary skill in this art. In re Simon, 461 F.2d 1387, 174 USPQ 114 (CCPA 1972).

Appellant further submits that one having ordinary skill in the art at the time of Appellant's invention would never have been motivated to modify *Walz* with *Popat et al.* in the manner suggested by the Examiner in formulating the rejections under 35 U.S.C. §103(a).

That elements, even distinguishing elements, are disclosed in the art is alone insufficient. It is common to find elements somewhere in the art. Moreover, most, if not all, elements perform their ordained and expected functions. The test is whether the invention as a whole, in light of all the teachings of the references in their entireties, would have been obvious to one of ordinary skill in the art at the time the invention was made. *Connell v. Sears, Roebuck & Co.*, 722 F.2d 1545, 220 USPQ 193 (Fed. Cir. 1983).

Appellant submits that the Examiner has merely located components of Appellant's claimed invention. However, that the art disclosed components of Appellant's claimed invention,

either separately or used in other combinations, is insufficient. A teaching, suggestion, or incentive must exist to make the combination made by Appellant. *Interconnect Planning Corp. v. Feil*, 774 F. 2d 1132, 1143, 227 USPQ 543, 551 (Fed. Cir. 1988).

Even assuming that one having ordinary skill in the art could somehow have combined *Walz* and *Popat et al.* as set forth by the Examiner, the resultant combination still lacks the critical elements positively recited in Claim 16.

In view of the foregoing, Appellant submits that the rejection of Claim 16 under 35 U.S.C. §103(a) is improper.

Dependent Claim 17 further requires the mailing assembly to have a tear line arranged for separating the first return postcard from the first anchor portion. Neither *Walz* nor *Popat et al.*, taken singly or in combination, teach or suggest a mailing assembly having a first mailing form with a first return postcard which has no adhesive as required by Claim 17. Additionally, neither *Walz* nor *Popat et al.*, taken singly or in combination, teach or suggest a mailing assembly having a second mailing form with a second return postcard and a second anchor portion removably attached to the second return postcard as required by Claim 17. Further, the Examiner admits that *Walz* does not disclose a second form having a second postcard and a second anchor portion, and a first return postcard having no adhesive. However, the Examiner does not assert that *Popat et*

al. teach or suggest a second form having a second postcard and a second anchor portion or a first return postcard having no adhesive as required by Claim 17. Therefore, the invention defined in Claim 17 would not have been obvious to one of ordinary skill in the art at the time of Appellant's invention in view of *Walz* and *Popat et al.* Accordingly, the rejection of Claim 17 under 35 U.S.C. §103(a) in view of *Walz* and *Popat et al.* is improper.

Dependent Claim 18 further requires the mailing assembly to have a tear line arranged for separating the first mailing form from the second mailing form. Neither *Walz* nor *Popat et al.*, taken singly or in combination, teach or suggest a mailing assembly having a first mailing form with a first return postcard which has no adhesive as required by Claim 18. Additionally, neither *Walz* nor *Popat et al.*, taken singly or in combination, teach or suggest a mailing assembly having a second mailing form with a second return postcard and a second anchor portion removably attached to the second return postcard as required by Claim 18. Further, nowhere do *Walz* and *Popat et al.*, taken singly or in combination, teach or suggest a mailing assembly having a tear line arranged for separating the first mailing form from the second mailing form as required by Claim 18. Moreover, the Examiner admits that *Walz* does not disclose a second form having a second postcard and a second anchor portion, and a first return postcard having no adhesive.

However, the Examiner does not assert that *Popat et al.* teach or suggest a second form having a second postcard and a second anchor portion or a first return postcard having no adhesive as required by Claim 18. Therefore, the invention defined in Claim 18 would not have been obvious to one of ordinary skill in the art at the time of Appellant's invention in view of *Walz* and *Popat et al.* Accordingly, the rejection of Claim 18 under 35 U.S.C. §103(a) in view of *Walz* and *Popat et al.* is improper.

Dependent Claim 19 further requires the mailing assembly to have a tear line arranged for separating the second anchor portion from the second return postcard. Neither *Walz* nor *Popat et al.*, taken singly or in combination, teach or suggest a mailing assembly having a first mailing form with a first return postcard which has no adhesive as required by Claim 19. Additionally, neither *Walz* nor *Popat et al.*, taken singly or in combination, teach or suggest a mailing assembly having a second mailing form with a second return postcard and a second anchor portion removably attached to the second return postcard as required by Claim 19. Further, nowhere do *Walz* and *Popat et al.*, taken singly or in combination, teach or suggest a mailing assembly having a tear line arranged for separating the second anchor portion from the second return postcard as required by Claim 19. Moreover, the Examiner admits that *Walz* does not disclose a second form having a second postcard and a second anchor portion, and a first return postcard having no adhesive.

However, the Examiner does not assert that *Popat et al.* teach or suggest a second form having a second postcard and a second anchor portion or a first return postcard having no adhesive as required by Claim 19. Therefore, the invention defined in Claim 19 would not have been obvious to one of ordinary skill in the art at the time of Appellant's invention in view of *Walz* and *Popat et al.* Accordingly, the rejection of Claim 19 under 35 U.S.C. §103(a) in view of *Walz* and *Popat et al.* is improper.

Dependent Claim 20 further requires the mailing assembly to have an area contained within the first return postcard variably printed with a machine readable code. Neither *Walz* nor *Popat et al.*, taken singly or in combination, teach or suggest a mailing assembly having a first mailing form with a first return postcard which has no adhesive as required by Claim 20. Additionally, neither *Walz* nor *Popat et al.*, taken singly or in combination, teach or suggest a mailing assembly having a second mailing form with a second return postcard and a second anchor portion removably attached to the second return postcard as required by Claim 20. Moreover, the Examiner admits that *Walz* does not disclose a second form having a second postcard and a second anchor portion, and a first return postcard having no adhesive. However, the Examiner does not assert that *Popat et al.* teach or suggest a second form having a second postcard and a second anchor portion or a first return postcard having no adhesive as required by Claim 20. Therefore, the invention

defined in Claim 20 would not have been obvious to one of ordinary skill in the art at the time of Appellant's invention in view of *Walz* and *Popat et al.* Accordingly, the rejection of Claim 20 under 35 U.S.C. §103(a) in view of *Walz* and *Popat et al.* is improper.

With respect to the assertion of the Examiner that it would have been obvious to one having ordinary skill in the art at the time the invention was made to have any desirable indicia in the designator section since it would only depend on the intended use of the assembly and the desired information to be displayed, Appellant asserts that the mailing assembly as specifically defined in Claim 16 has a novel and an unobvious functional relationship as required for patentability. Additionally, Appellant asserts that the Examiner has improperly construed Claim 16 to include indicia in the designator section. Claim 16 merely requires that the first designator identifies the special service as one of registered mail, certified mail, COD, insured mail and return receipt for merchandise. Still further, the first designator is not a mere supportive substrate for printed matter. The first designator identifies the special service. Therefore, the mailing assembly as defined in Claim 16 has the novel and unobvious functional relationship that is required for patentability.

With respect to the assertion of the Examiner that only routine skill in the art was involved to include any desirable

amount of mailing forms with postcards and anchor portions, Appellant asserts that the mailing assembly as specifically defined in Claim 16 is more than mere duplication of the essential working parts of a device and requires more than ordinary skill in the art. More specifically, Claim 16 requires more than mere mailing forms with postcards and anchor portions. Further, Claim 16 requires a first designator which is indicative of a special service. Therefore, the mailing assembly as defined in Claim 16 having a first designator which is indicative of a special service involved more than only routine skill in the art.

With respect to the assertion of the Examiner that only routine skill in the art was involved to construct the two substrate return postcard as a single substrate postcard, Appellant asserts that the mailing assembly as specifically defined in Claim 16 requires more than the mere forming in one piece an article which has formerly been formed in two pieces. Claim 16 requires a first backing strip received over the adhesive on the backside of the first anchor portion and a second backing strip received over the adhesive on the backside of the second anchor portion. Therefore, the constructing of the mail assembly as defined in Claim 16 having a first backing strip and a second backing strip involves more than only routine skill in the art.

In view of the forgoing, the rejection of Claims 16-20 under

35 U.S.C. §103(a) is improper.

CONCLUSION

For the foregoing reasons, Appellant respectfully submits that the rejections of Claims 1-20 are erroneous as a matter of law and fact and respectfully requests the Board to reverse the rejections.

Respectfully submitted,



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2) SUPPLEMENTAL APPENDIX

EXHIBIT A: Final Rejection

EXHIBIT B: *Petkovsek* (U.S. Patent No. 5,697,648)

EXHIBIT C: *Schwan et al.* (U.S. Patent No. 5,524,934)

EXHIBIT D: *Walz* (U.S. Patent No. 5,664,725)

EXHIBIT E: *Popat et al.* (U.S. Patent No. 6,001,209)



APPENDIX: Claims 1-20.

1. A special service mailing assembly comprising:

a backing sheet;

a first mailing form removably attached to the backing sheet by an adhesive wherein the first mailing form includes a first return postcard and a first designator section contained within first exterior sides that define the first return postcard wherein the designator section has an area to denote the type of special service for which the assembly is implemented and a tracking area for tracking the mailpiece and further wherein the first designator section has a color corresponding to one of a plurality of special services for delivery of a mailpiece wherein the color is different for each one of the plurality of special services; and

a second mailing form removably attached to the first mailing form wherein the second mailing form is removably attached to the backing sheet by the adhesive and further wherein the second mailing form includes a second return postcard and a second designator section indicative of the special service contained within second exterior sides that define the second return postcard.

2. The assembly of Claim 1 further comprising:

a first anchor portion extending outside one of the first exterior sides of the first return postcard wherein the first anchor portion has the adhesive on a back side of the first anchor

portion.

3. The assembly of Claim 2 further comprising:

a removable label section within the first anchor portion removably attached to the first anchor portion.

4. The assembly of Claim 2 wherein the first anchor portion is removably attached to the first return postcard via a tear line.

5. The assembly of Claim 2 further comprising:

a third designator section contained within the first anchor portion.

6. The assembly of Claim 3 further comprising:

a tear line separating the removable label section within the first anchor portion.

7. The assembly of Claim 1 further comprising:

an area within the first designator section having a machine readable code.

8. The assembly of Claim 1 wherein the first designator section is distinctly colored from a remainder of the first return postcard.

9. The assembly of Claim 1 wherein the special service includes one of certified mail, registered mail, insured mail, COD, or return receipt for merchandise mail.

10. The assembly of Claim 2 further comprising:

a second anchor portion removably attached to the first return postcard outside one of the exterior sides of the first return postcard wherein a back side of the second anchor portion includes

the adhesive on a back side of the second anchor portion.

11. The assembly of Claim 10 further comprising:

a tear line separating the second anchor portion from a remainder of the first return postcard.

12. The assembly of Claim 1 further comprising:

a tear line separating the first mailing form from the second mailing form.

13. A method for preparing a mailpiece for delivery of the mailpiece by a special service, the method comprising the steps of:

providing a backing sheet;

providing a first mailing form including a first return postcard removably attached to the backing sheet wherein the first return postcard is integrally formed with a first special service designation section wherein the designation section has an area for receiving instructions regarding the delivery, type of special service and an identifying number of the mailpiece by the special service and further wherein the first special designation section is completely within exterior sides that define the first postcard;

providing an area within the return postcard wherein variable information is printed;

providing a second mailing form including a second return postcard removably attached to the backing sheet wherein the second return postcard is integrally formed with a second special designation section wherein the second special designation section is completely within exterior sides that define the second

postcard;

printing information relating to the special service delivery of the mailpiece on the area within the return postcard;

removing the first mailing form from the backing sheet; and
attaching the first mailing form to the mailpiece to effect delivery of the mailpiece by the special service.

14. The method of Claim 13 further comprising the step of:

providing an anchor portion adjacent to the first return postcard.

15. The method of Claim 14 further comprising the steps of:

providing a removable label section as a portion of the anchor portion; and

removing the removable label section from the anchor portion.

16. A mailing assembly for preparing a mailpiece for delivery by a special service, the assembly comprising:

a first mailing form having a first return postcard and a first anchor portion removably attached to the first return postcard wherein the first anchor portion has an adhesive on a backside of the first anchor portion and further wherein the first return postcard has no adhesive;

a first backing strip received over the adhesive on the backside of the first anchor portion;

a second mailing form having a second return postcard and a second anchor portion removably attached to the second return postcard wherein the second anchor portion has the adhesive on a

backside of the second anchor portion and further wherein the second return postcard has no adhesive;

a second backing strip received over the adhesive on the backside of the second anchor portion; and

a first designator section indicative of a special service contained within exterior sides of the first return postcard wherein the first designator identifies the special service as one of registered mail, certified mail, COD, insured mail and return receipt for merchandise.

17. The assembly of Claim 16 further comprising:

a tear line arranged for separating the first return postcard from the first anchor portion.

18. The assembly of Claim 16 further comprising:

a tear line arranged for separating the first mailing form from the second mailing form.

19. The assembly of Claim 16 further comprising:

a tear line arranged for separating the second anchor portion from the second return postcard.

20. The assembly of Claim 16 further comprising:

an area contained within the first return postcard variably printed with a machine readable code.



SUPPLEMENTAL

APPENDIX



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/322,594	05/28/1999	GLENN PETKOVSEK	USA-P99-005	8241

7590

06/19/2003

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EXAMINER

HENDERSON, MARK T

ART UNIT

PAPER NUMBER

3722

DATE MAILED: 06/19/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/322,594

Applicant(s)

PETKOVSEK, GLENN

Examiner

Mark T Henderson

Art Unit

3722

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 March 2003.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

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DETAILED ACTION

Faxing of Responses to Office Actions

In order to reduce pendency and avoid potential delays, TC 3700 is encouraging FAXING of responses to Office Actions directly into the Group at (703)305-3579. This practice may be used for filing papers which require a fee by applicants who authorize charges to a PTO deposit account. Please identify the examiner and art unit at the top of your cover sheet. Papers submitted via FAX into TC 3700 will be promptly forwarded to the examiner.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 1-15 are finally rejected under 35 U.S.C. 103(a) as being unpatentable over Petkovsek (5,697,648) in view of Schwan et al (5,524,934).

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Petkovsek discloses in Fig. 1, 2 and 6, a mailing assembly and a method for preparing a mailpiece comprising a backing sheet (11), first and second mailing forms (10a and 10b) removably attached to the backing sheet by an adhesive (Col. 6, lines 21-25) and separable by a tear line (60) wherein the forms includes a first return postcard (18) integrally formed with a designator section (20, 24A, and 26) indicative of a special service (Col. 4, lines 10-14 and 29-31) having an area consisting of a machine readable code (24 for tracking the mailpiece), an identifying number (26A), an area for receiving instructions (20), and being distinctly colored (Col. 4, lines 40-41) and contained within the first exterior sides (right of perforated line 29a, and left of perforated line 33a) that defines the postcard; wherein the first mailing form (10a) is removably attached (60) to the second mailing form (10b); wherein the second mailing form (Fig. 6) has a second return postcard (18b) integrally formed with a second designator section which is contained within the second exterior sides of the second return postcard; a first anchor portion (28) extending outside one of the exterior sides (33a) of the first return postcard, wherein the first anchor portion has adhesive (48) on the backside (Fig. 2), is removably attached to the postcard via a tear line (33) a removable label section (30) attached to the first anchor portion (28) via a tear line (32), a third designator section (36) contained within the first anchor portion, and a second anchor portion (27) removably attached to the return postcard by a tear line (29).

However, Petkovsek does not disclose: a designator section having a color corresponding to one of a plurality of special services, wherein the color is different for each one of the special services.

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Shwan et al discloses in Fig. 3, a record in the form of a label assembly (Col. 1, lines 10 and 11; and Col. 7, lines 14-16) having selected portions for forming areas of a plurality of different colors, wherein coating of colorless color formers and developers are initially combined (upon application of an imaging force) to form colored visible area (Fig. 3). The coatings (color formers and color developers) can be applied in selected areas on the label, and when combined can form blocks of background color(s) (Col. 4, lines 58-61) wherein the label can be used for mailing labels in which different colors are activated to designate the method (special services) of shipment.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Petkovsek's label to include a label having designated areas, wherein each area has a color corresponding to a shipment method (special services) as taught by Schwan et al for the purpose of providing a means of emphasizing different categories of information on a label assembly.

In regards to **Claims 1, 7, 9 and 13**, a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In a claim drawn to a process of making, the intended use must result in a manipulative difference as compared to the prior art. See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963). Therefore, Petkovsek's label is capable of denoting a special service that includes

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registered mail, certified mail, COD, return receipt for merchandise. Furthermore, in regards to Claim 13, the bar coded area of Petkovsek is capable of receiving instructions regarding the delivery of the mailpiece by a special service, since it would be obvious to program the bar code to receive or transmit any desirable information depending on the intended use of the bar coded area and the desired information to be retrieved.

In regards to **Claims 13-15**, the method for preparing a mailpiece for delivery by providing a backing sheet (Fig. 1), providing a first and second mailing form having a first and second return postcard integrally formed with a first and second designation section (as seen in Fig. 6), providing an anchor portion adjacent the return postcard (27 and 28 as seen in Fig 2), removing the mailing form from the backing sheet and attaching the form to a mailpiece (seen in Fig. 4), providing a removable label section (30) as a portion of the anchor portion (28, as seen in Fig. 1, and stated in Col. 5, lines 1-6), a providing an area for variable printed information (signature section (marked by an "X") shown in Fig. 5, below section (22)) is taught by Petkovsek.

2. Claims 16-20 are finally rejected under 35 U.S.C. 103(a) as being unpatentable over Walz (5,664,725) in view of Popat et al (6,001,209).

Walz discloses in Fig. 1, 4 and 5, an assembly comprising a first form (84) having a first postcard (70), a first anchor portion (58) removably attached to the postcard via a tear line (24), wherein the first anchor has adhesive (16) on the backside of the anchor (seen in Fig. 5), a first

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backing strip (49) received over the adhesive on the anchor portion's backside, an integrally formed designator section (73) indicative of special services such as restricted delivery which can consist of: certified mail, COD, insured mail, etc..(Col. 4, lines 45-48), an area (66) contained within the postcard printed with machine readable code (75), and a second form (82) removably attached to the first form by a tear line (20).

However, Walz does not disclose: a second form having a second postcard and a second anchor portion; and a first return postcard having no adhesive.

Popat et al discloses in Fig. 10, an assembly comprising a first form (254a) and a second form (254b), having anchor portions (258, 256, 256c) wherein a tear line (252c) is arranged to separate the first form from the second form.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Walz's assembly to include multiple form assembly connected by a tear line as taught by Popat et al for the purpose of printing multiple areas of a sheet without disposing extra unused paper area and for providing conveniency for anyone using an advanced printer.

In regards to **Claim 16**, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have any desirable indicia in the designator section since it would only depend on the intended use of the assembly and the desired information to be displayed. *In re Gulack* 217 USPQ 401, (CAFC 1983). The fact that the content of the printed matter place in the designated section may render the section more convenient by providing an

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individual with a specific form does not alter the functional relationship. Mere support by the substrate for the printed matter is not the kind of functional relationship necessary for patentability. Thus, there is no novel and unobvious functional relationship between the printed matter and the substrate that is required for patentability.

Furthermore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to include any desirable amount of mailing forms with postcards and anchor portions, since it has been held that mere duplication of the essential working parts of a device involves only routine skill in the art. *St. Regis Paper Co. v. Bemis Co.*, 193 USPQ 8.

Further, it would have been obvious to one having ordinary skill in the art at the time the invention was made to construct the two substrate return postcard as a single substrate postcard, since it has been held that forming in one piece an article which has formerly been formed in two pieces and put together involves only routine skill in the art. *Howard v. Detroit Stove Works*, 150 U.S. 164 (1893).

Response to Arguments

3. Applicant's arguments filed on November 25, 2002 have been fully considered but they are not persuasive.

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In response to applicant's arguments that the Petkovsek reference does not disclose a designator section having a color corresponding to one of a plurality of special services, wherein the color is different for each one of the special services. The examiner submits that the Petkovsek reference as modified by Schwan et al discloses this limitation. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Petkovsek's label to include a label having designated areas, wherein each area has a color corresponding to a shipment method (special services) as taught by Schwan et al for the purpose of providing a means of emphasizing different categories of information on a label assembly.

In response to applicant's argument that the Petkovsek and Walz references do not disclose a designator section within the exterior sides that define a postcard wherein the designator section is integrally formed with the return postcard, the examiner submits that both Petkovsek and Walz discloses a designator section in Fig. 1 as set forth in the above 103 rejections. Further, since applicant has not defined in detail what "special service" entails in Claim 16, the examiner has interpreted "special service" in its broadest sense. Furthermore, Applicant's arguments regarding "the special designation section" do not comply with 37 CFR 1.111(c) because they do not clearly point out the patentable novelty which he or she thinks the claims present in view of the state of the art disclosed by the references cited or the objections made. Further, they do not show how the amendments avoid such references or objections.

In regards to Applicant's argument that the prior art of record does not teach a first and second return post card wherein the "return post cards do not have an adhesive backside", the

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examiner submits that Walz does indeed teach that the backside of the post card (78) does not have adhesive. The return postcard in the Walz reference is considered is disclosed as having two substrates divided by an adhesive (as seen in Fig. 1, (front) and 5 (back) and 3 (showing adhesive which divides the substrate). Furthermore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to construct the two substrate return postcard as a single substrate postcard, since it has been held that forming in one piece an article which has formerly been formed in two pieces and put together involves only routine skill in the art.

Conclusion

4. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however,

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will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mark T. Henderson whose telephone number is (703)305-0189. The examiner can be reached on Monday - Friday from 7:30 AM to 3:45 PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner supervisor, a. L. Wellington, can be reached on (703) 308-2159. The fax number for TC 3700 is (703)305-3579. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the TC 3700 receptionist whose telephone number is (703)308-1148.



MTH

June 9, 2003

A. L. WELLINGTON
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3700



[11] Patent Number: 5,697,648

[45] **Date of Patent:** Dec. 16, 1997

- | | | | |
|-----------|---------|-----------|-----------|
| 4,682,793 | 7/1987 | Walz . | |
| 5,183,203 | 2/1993 | Sanders . | |
| 5,190,210 | 3/1993 | Walz . | |
| 5,476,420 | 12/1995 | Manning | 283/116 X |
| 5,507,526 | 4/1996 | Petkovsek | 283/116 X |

Primary Examiner—Frances Han
Attorney, Agent, or Firm—Hill, Steadman & Simpson

[57] **ABSTRACT**

An assembly for mailing an article requiring special services and a method for mailing same are provided. The assembly includes a single sheet constructed in such a way that one portion of the sheet provides a label and the other portion provides a return postcard or other special service form for attachment to an envelope in its assembled position. The return postcard is integrally formed, but removably attached, such that the return postcard remains attached to the envelope until received by the addressee, at which time the return postcard may be removed.

9 Claims, 6 Drawing Sheets

[58] **Field of Search** 283/116, 81, 61;
462/6-8, 64, 65; 281/2, 5

U.S. PATENT DOCUMENTS

4,418,865	12/1983	Bowen .
4,491,334	1/1985	Dicker .
4,565,317	1/1986	Kranz .

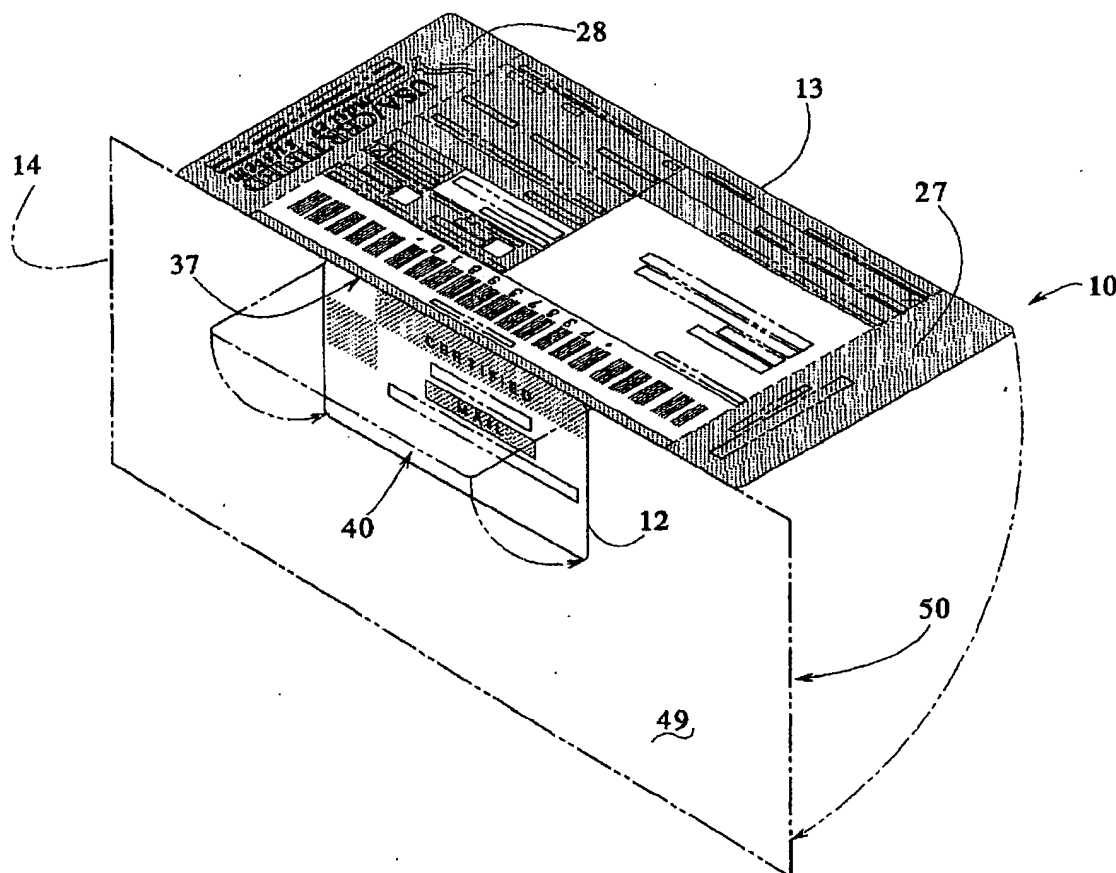
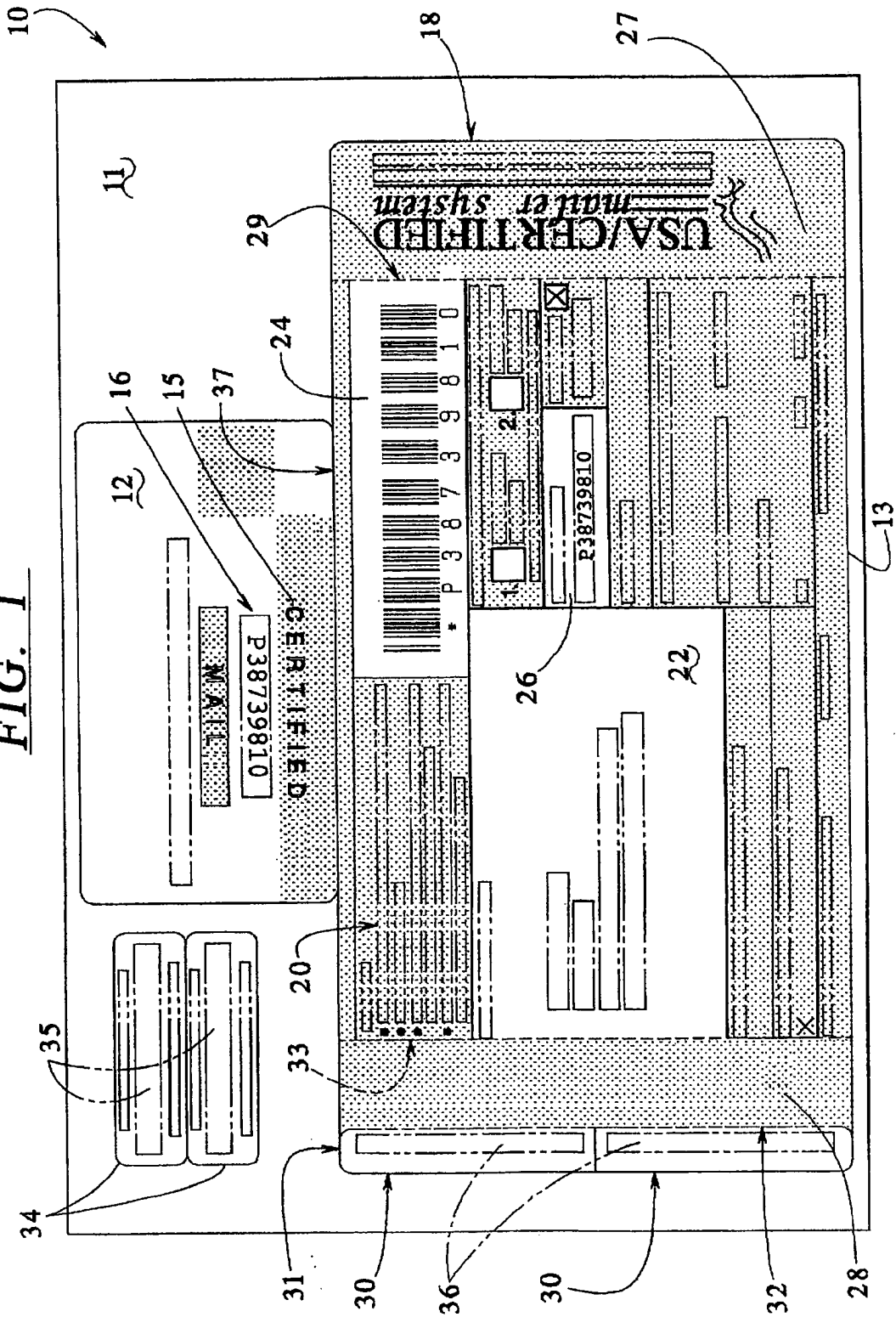


EXHIBIT B

FIG. 1



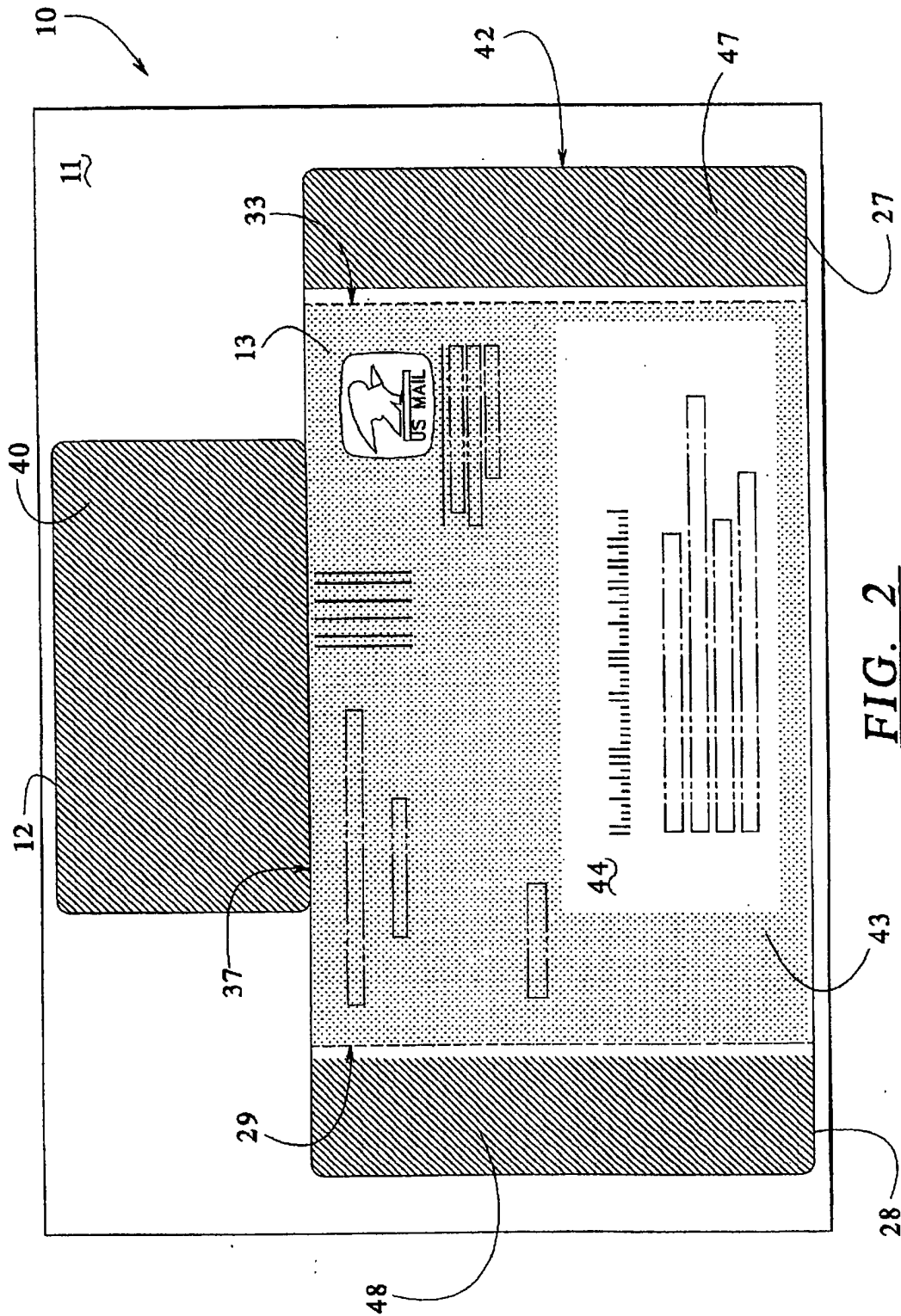
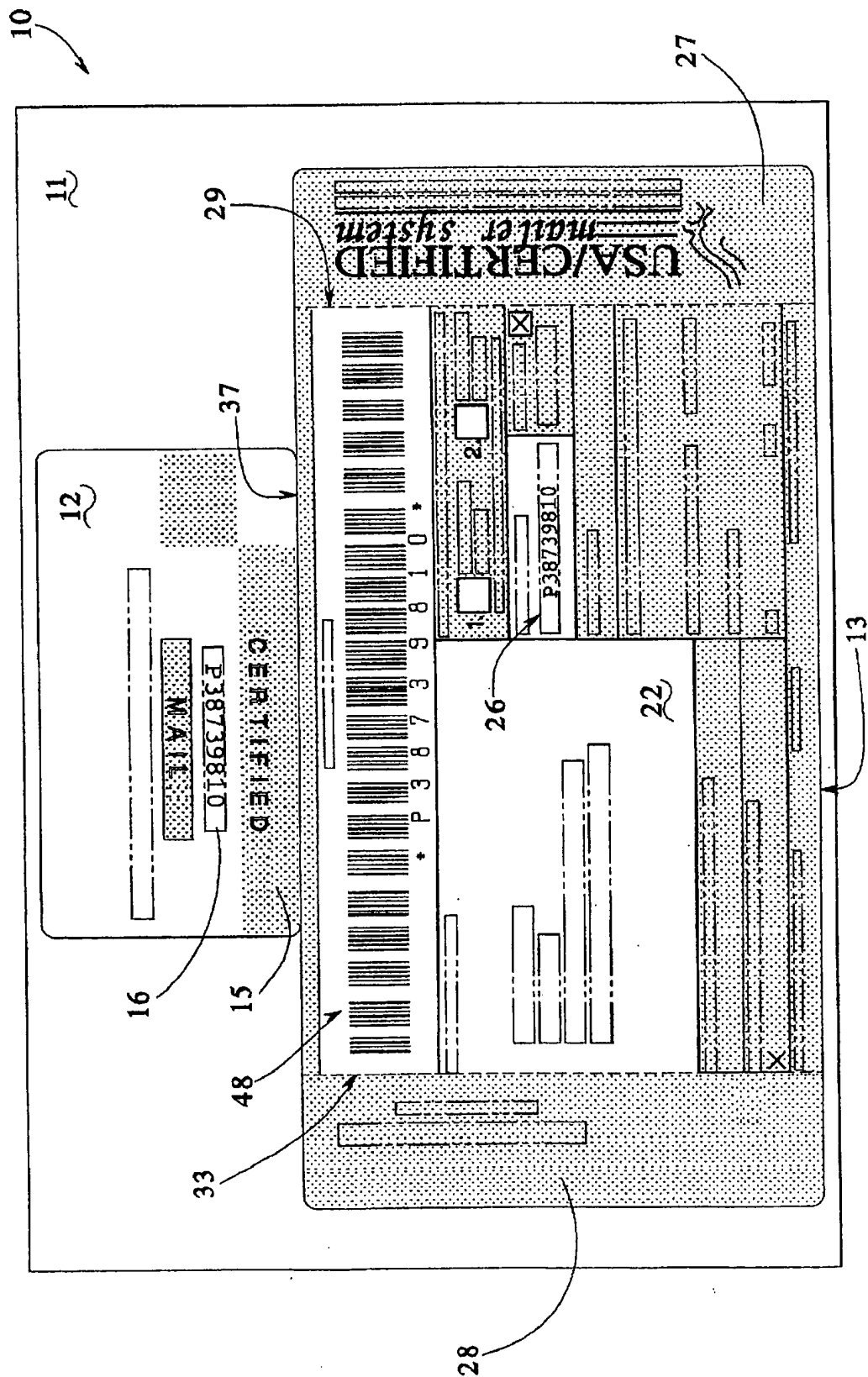


FIG. 3



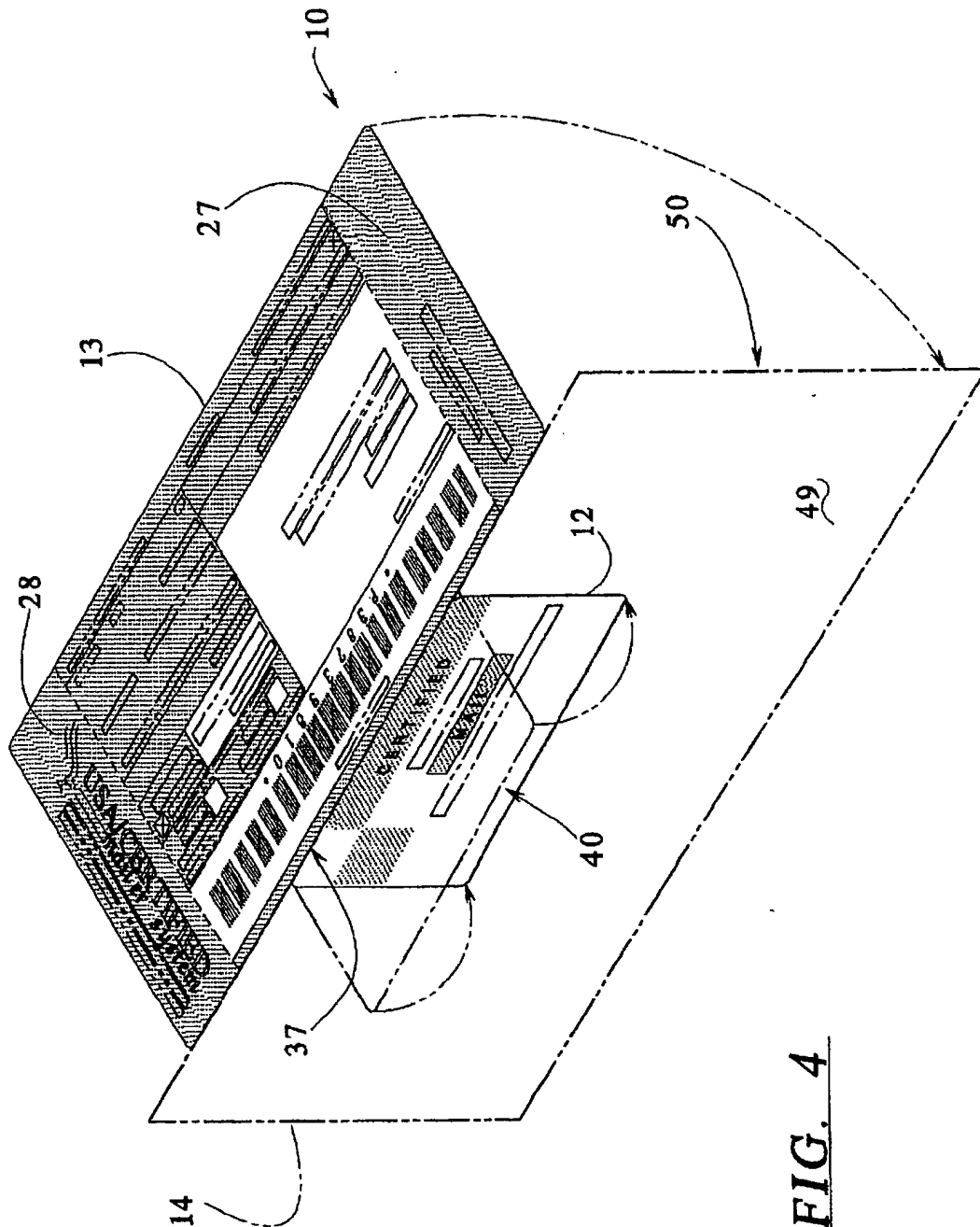


FIG. 5

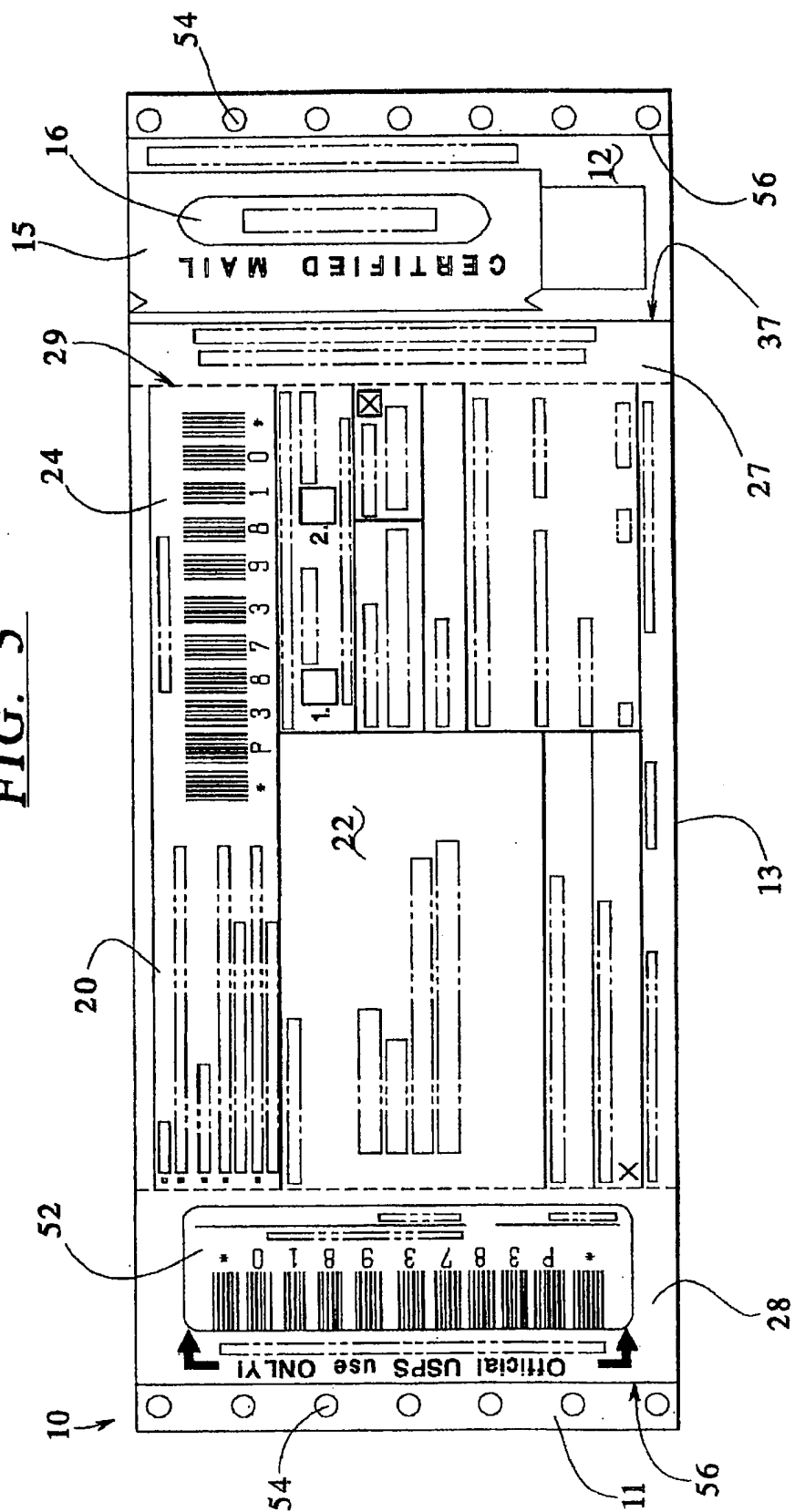
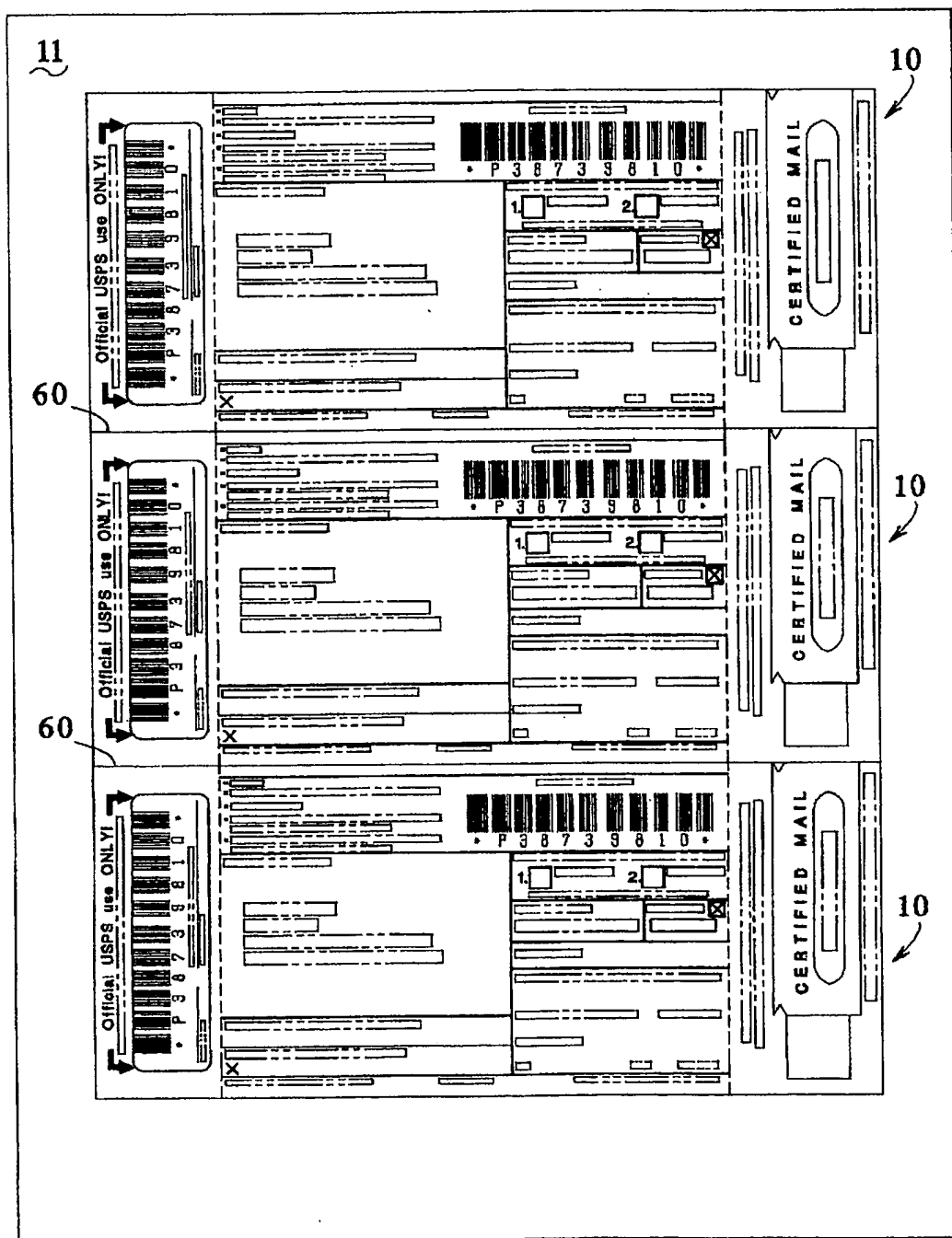


FIG. 6



INTEGRAL SPECIAL SERVICE MAILING ASSEMBLY AND A METHOD FOR USING SAME

BACKGROUND OF THE INVENTION

The present invention generally relates to a form for mailing an article requiring special services. More specifically, the present invention relates to an integral special service mailing assembly for mailing an article requiring special services having a return receipt postcard and a label indicative of the special service and a method for using same.

It is, of course, generally known to mail an article requiring special services for delivery of the article, such as certified mail, registered mail, insured mail, COD, return receipt for merchandise and the like. Known components and methods for assembling a mailer for mailing an article requiring special services have multiple, separate components requiring attachment to an exterior of an envelope for the special services delivery of the article.

For example, when a customer of the U.S. Postal Service desires that an article be mailed by certified mail, for instance, an envelope containing the article is provided to the postal employee by the customer. The postal employee is then required to attach or otherwise provide the envelope with a permanent seal or label indicating that the envelope is to be delivered by certified mail.

Then, a return receipt postcard must be attached to the envelope. The postcard must be completed by the postal employee and/or the customer mailing the envelope containing the article. Some postcards include areas having an adhesive for attaching the postcard to the envelope. Other postcards require separate attachment, by using tape, for example.

Such a procedure is both complex and time-consuming, as well as labor intensive. The procedure requires the postal employee to ensure that all of the appropriate labels and documents are affixed to the envelope prior to delivery of the article. Therefore, the appropriate forms, labels and the like must be adequately stocked and available for the postal employee's use. Further, the postal employee must ensure that all articles are appropriately affixed to the envelope. In addition, the return receipt postcard must be suitably affixed to the envelope so that the return postcard is not removed during the mailing of the article to its destination. Of course, it should be understood that an envelope prepared for special service mailing may be prepared by any individual, not just a postal employee.

A need, therefore, exists for an improved integral special service mailing assembly requiring special services, such as certified mail, insured mail, registered mail, COD, return receipt for merchandise and the like, and a method for using same.

SUMMARY OF THE INVENTION

The present invention provides an assembly and a method for using same for mailing an article requiring special services, such as for certified mail, insured mail, register mail, COD, return receipt for merchandise and the like.

To this end, in an embodiment of the present invention, an assembly for mailing an article requiring special services is provided. The assembly includes a sheet having a first section integrally formed with a second section, the first section including a label indicative of the special service, and the second section including a form, a first anchor

portion and a second anchor portion located at opposite ends of the form, the form independently detachable from the anchor portions and the label.

In an embodiment, the special service mailing assembly further has a line of separation formed between the form and the label, the line of separation constructed and arranged to provide independent removal of the form.

In an embodiment, the special service mailing has a first tear line formed between the first anchor portion and the form, and a second tear line formed between the second anchor portion and the form, the first tear line and the second tear line constructed and arranged to provide independent detachment of the form.

In an embodiment, the form of the special service mailing assembly is a return receipt postcard.

In an embodiment, the label of the special service mailing assembly is a certified mail label.

In an embodiment, the adhesive portion of the special service mailing assembly is a peel-and-stick adhesive portion.

In an embodiment, the sheet of the special service mailing assembly includes printer feed holes located along opposite sides of the sheet.

In an embodiment, the special service mailing assembly has at least one identifier section having an identifier related to the special service label removably attached to the sheet.

In an embodiment, the label of the special service mailing assembly has an adhesive portion.

In an embodiment, the form of the special service mailing assembly has a first adhesive portion located on the first anchor portion and a second adhesive portion located on the second anchor portion.

In an embodiment, the label of the special service mailing assembly has at least one identifier section having an identifier related to the special service label removably attached to at least one of the anchor portions.

In another embodiment of the present invention, a special service mailing assembly is provided having a sheet, and a plurality of special service forms removably attached to the sheet, the plurality of special service forms integrally formed on the sheet and capable of independent detachment from the sheet.

In an embodiment, the sheet of the special service mailing assembly may have printer feed holes located along opposite sides of the sheet.

In an embodiment, the plurality of special service forms of the special service mailing assembly are return receipt postcards.

In an embodiment, the plurality of special service forms of the special service mailing assembly are return receipt postcards in combination with special service labels.

In an embodiment, the special service mailing assembly includes a tear line formed in the length thereof to provide independent detachment of the plurality of special service forms from one another.

In an embodiment, the special service mailing assembly includes a form having a first anchor portion with a tracking indicator and a second anchor portion, the form removably attached to the first and second anchor portions, and a label indicative of the special service removably attached to one of the anchor portions of the form.

In another embodiment of the present invention, a method is provided for mailing an article requiring a special service, the article having a front side and a back side. The method

has the steps of providing a sheet having a first section integrally formed with a second section, the first section including a label indicative of the special service, and the second section including a form, a first anchor portion and a second anchor portion located at opposite sides of the form, the form being independently detachable from the anchor portions and the label; attaching the label to the front side of the article; and attaching the first anchor portion and the second anchor portion to the back side of the article.

In an embodiment, the method further comprises the steps of providing an adhesive portion on the label; and providing a first adhesive portion located on the first anchor portion and a second adhesive portion located on the second anchor portion.

In an embodiment, the method further comprises the steps of providing a peel-and-stick adhesive portion on the label; and providing a first peel-and-stick adhesive portion on the first anchor portion and a second peel-and-stick adhesive portion on the second anchor portion.

It is, therefore, an advantage of the present invention to provide an improved assembly for mailing an article requiring special services.

Another advantage of the present invention is to provide a simplified method for mailing an article requiring special services.

And, another advantage of the present invention is to provide an assembly that is integrally formed as a complete unit for mailing and labeling of an article requiring special services.

Yet another advantage of the present invention is to provide an assembly and a method for mailing an article requiring special services without requiring additional adhesives or fixatives for attaching the same to the mailpiece.

Moreover, an advantage of the present invention is to provide an assembly and a method for mailing an article requiring special services that is substantially foolproof.

Yet a further advantage of the present invention is to provide an assembly which will work on automated printing equipment.

And, another advantage of the present invention is to provide an assembly including a label and a form that provides for pre-imaging or pre-printing of variable information thereon.

Additional features and advantages of the present invention are described in, and will be apparent from, the detailed description of the presently preferred embodiments and from the drawings.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 illustrates a plan view of a front side of an embodiment of an assembly of the present invention.

FIG. 2 illustrates a plan view of a back side of an embodiment of the assembly of the present invention.

FIG. 3 illustrates a plan view of a front side of another embodiment of the assembly of the present invention.

FIG. 4 illustrates a perspective view of a front side of an embodiment of the assembly of the present invention with an article to be mailed using same.

FIG. 5 illustrates a plan view of a front side of another embodiment of the assembly of the present invention.

FIG. 6 illustrates a plan view of yet another embodiment of the assembly of the present invention in which a plurality of assemblies are located on a single sheet.

DETAILED DESCRIPTION OF THE PRESENTLY PREFERRED EMBODIMENTS

The present invention provides an integral special service mailing assembly for mailing an article requiring special

services. Further, the present invention provides a method for using the assembly for mailing articles requiring special services.

Referring now to the drawings, wherein like numerals refer to like parts, FIG. 1 is a front plan view that generally illustrates an embodiment of an assembly 10 formed from a single sheet 11 to provide both a label 12 and a return postcard 13. The assembly 10 is capable for use in mailing an article 14 requiring a special service, such as shown in FIG. 4. Although a certified mail envelope is illustrated, it should be understood that the present invention is applicable to any mailing item requiring special services, such as insured mail, registered mail, COD, return receipt for merchandise and the like.

The front side of the embodiment of the assembly 10 illustrated in FIG. 1 includes the label 12. The label 12 is, in a preferred embodiment, a pre-printed label indicative of the special service required for mailing of the article 14. The label 12 is preferably pre-printed directly on the sheet 11. The pre-printed label 12 includes a special service indicator 15 and a window section 16 in which an article identification number can be printed.

The assembly 10 also has a front bottom portion 18 that includes the return receipt postcard 23 that can be similar to United States Postal Service form PS-3811. The return receipt postcard 13 may include a set of instructions 20 for the sender, as well as an article addressee section 22 for pre-printing the addressee's address. The return receipt postcard 13 also has a document control number bar code 24 to aid in tracking of the article 14.

In addition, the return receipt postcard 13 has a number of sub-sections requiring completion by the sender prior to mailing. One sub-section illustrated at numeral 26 includes a machine readable article identification number corresponding to the number in the window section 16 of the pre-printed label 12. The sub-section 26 may have a background color that contrasts with the color of the return receipt postcard 13 so as to simplify the reading of the machine-readable code in the sub-section 26. Other sections, as well, may include similar color-contrasting portions within the return receipt postcard 13.

Another section of the bottom portion 18 of the assembly 10 is, in a preferred embodiment, a first anchor portion 27 at one end of the return receipt postcard 13 and a second anchor portion 28 at the opposite end. The first anchor portion 27 is separable from the return receipt postcard 13 by means of a perforated tear line 29.

The second anchor portion 28 may include at least one article tracking label 30 provided along a detachable strip 31 at the opposite end of the bottom portion 18 of the assembly 10 and is removable from the bottom portion 18 by a perforated tear line 32. The second anchor portion 28 is also separable from the return receipt postcard 13 by tearing along a perforated tear line 33.

The article tracking label 30 may be adhesively backed for subsequent attachment to a receipt or other item requiring designation of the article number for related purposes. As illustrated, two tracking labels 30 are provided in the embodiment shown. For example, one of the tracking labels 30 may be used by a postal delivery employee on a postal form PS-3849, a delivery notice, (not shown). The second tracking label 30 may be used for the receiver's record use.

In addition, in the embodiment shown, two additional tracking labels 34 are provided. The two additional tracking labels 34, which also include a section 35 for the article identification number, may be used for the sender's records.

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The certified article number tracking labels 30 can also be used for the sender's and receiver's record keeping and/or accounting use. Each tracking label 30 has a section 36 for the article identification number. The tracking label 30 may be provided with adhesive on its reverse side. The tracking label 30 may also be a peel-and-stick type label.

Thus, the bottom portion 18 of the assembly 10 includes three main sections: the return receipt postcard 13 and the first and second anchor portions 27, 28. In addition, the tracking labels 30, 34 are provided. The label 12 may be separated from the return receipt postcard 13 by a score line 37 to facilitate separation of the postcard 13 upon delivery of the article 14. As mentioned above, the return receipt postcard 13 has a number of sub-sections requiring completion by the sender prior to mailing of the article 14. After delivery of the article 14, the return receipt postcard 13 is detachable from the first and second anchor portions 27, 28 by tearing along the perforated tear lines 29, 33, respectively.

An advantage of the present invention is that a number of the sub-sections of the return postcard 13 and the label 12 discussed above can be pre-printed when the assembly 10 of the present invention is used.

Referring now to FIG. 2, a back plan view of an embodiment of the assembly 10 is illustrated. The reverse side of the label 12 shown in FIG. 1 has an adhesive portion 40. The adhesive portion 40 may be a peel-and-stick type adhesive and is provided to seal the label 12 to the article 14 requiring special service mailing as shown in FIG. 4.

A back bottom portion 42 of the assembly 10 includes a front side 43 of the return receipt postcard 13. The return receipt postcard 13 includes a "Return To" section 44. The "Return To" section 44 may be color-contrasted with the remainder of the return receipt postcard 13 to enable simplified reading of the "Return To" section 44.

The score line 37 is provided along the top side of the return receipt postcard 13. For subsequent detachment of the return receipt postcard 13, the perforated tear lines 29, 33 are provided along the edges adjacent to the anchor portions 27, 28. The first anchor portion 27 has a first adhesive portion 47 and the second anchor portion 28 has a second adhesive portion 48 to adhere the back bottom portion 42 to the article 14 prior to mailing.

FIG. 3 shows another embodiment of the assembly 10 of the present invention, wherein like numerals represent like parts. This embodiment is a simplified version of the prior embodiment in that it does not have the instruction section 20 nor does it have the tracking labels 30, 34. However, the embodiment illustrated in FIG. 3 has an enlarged bar code region 48 for easier reading during high speed processing. The embodiment of the present invention illustrated in FIG. 3 is shown in use in FIG. 4.

Referring now to FIG. 4, the article 14 requiring special service, shown from its front side, is shown. The pre-printed label 12 is shown having the window section 16 in which the certified mail number is printed either manually or automatically. As illustrated, the label 12 folds down onto a front side 49 of the article 14 requiring special service mailing. The label 12 is adhered to the front side 49 of the article 14 by means of the adhesive portion 40 located on the back side of the label 12 (see FIG. 2).

Also as illustrated in FIG. 4, the bottom portion 18 of the assembly 10, including the anchor portions 27, 28 and the return receipt postcard 13, is sealed to a back side 50 of the article 14, and the anchor portions 27, 28 are sealed to the article 14 by the adhesive portions 47 and 48, respectively. Also, the score line 37 is located at the top of the article 14

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to provide for easier subsequent separation of the return receipt postcard 13 from the anchor portions 27, 28 and the label 12 upon delivery of the article 14.

FIG. 5 illustrates another embodiment of the assembly 10 of the present invention in which like numerals represent like parts. In the embodiment shown in FIG. 5, an alternate orientation of the label 12 with respect to the postcard 13 is shown. For example, the score line 37 is located between the label 12 and the return receipt postcard 13 to allow separation of the label 12 from the postcard 13. In addition, a tracking indicator 52 is provided on the second anchor portion 28.

Another variation in the embodiment shown in FIG. 5 is that the sheet 11 has a plurality of tracker holes 54 on the edges thereof for use in a printer (not shown) having tracking wheels to advance the paper. The tracking holes 54 are located on a tracking strip 56.

In addition, a plurality of the assembly 10 can be provided on the single sheet 11 as shown in FIG. 6. Each assembly 10 is separable from the adjacent assembly 10. This can be accomplished by a score line 60. In such a case, it is preferred that the assembly 10 be a peel-and-stick type assembly that is removably attached to the sheet 11. Thus, each individual assembly 10 is detachable from the sheet 11 as needed. Also, the entire sheet can be printed at one time for subsequent separation and application to separate articles 14.

The assembly 10 can be printed using any known method of printing and is not limited to any single type. Such printing methods include, but are not limited to, laser printing, thermal printing, dot matrix printing and the like. Printing may be performed on continuously fed forms or on individually fed forms.

It should be understood that various changes and modifications to the presently preferred embodiments described herein will be apparent to those skilled in the art. Such changes and modifications may be made without departing from the spirit and scope of the present invention and without diminishing its attendant advantages. It is, therefore, intended that such changes and modifications be covered by the appended claims.

I claim:

1. A special service mailing assembly for mailing an article requiring a special service, the assembly comprising:

a first sheet;

a second sheet directly attached to the first sheet, having a first section integrally formed with a second section, the first section including a label having an adhesive back side indicative of the special service, and the second section including a form, a first anchor portion having an adhesive back side and a second anchor portion having an adhesive back side wherein the anchor portions are located at opposite ends of the form, the form being independently detachable from the anchor portions and the label and further wherein the second sheet is removably attached to the first sheet by the adhesive back sides of the label, the first anchor portion and the second anchor portion.

2. The special service mailing assembly of claim 1 further comprising:

a line of separation formed between the form and the label, the line of separation constructed and arranged to provide independent removal of the form.

3. The special service mailing assembly of claim 1 further comprising:

a first tear line formed between the first anchor portion and the form; and

- a second tear line formed between the second anchor portion and the form, the first tear line and the second tear line constructed and arranged to provide independent detachment of the form.
4. The special service mailing assembly of claim 1 5 wherein the form is a return receipt postcard.
5. The special service mailing assembly of claim 1 wherein the label is a certified mail label.
6. The special service mailing assembly of claim 1 wherein the first sheet includes printer feed holes located 10 along opposite sides of the first sheet.
7. The special service mailing assembly of claim 1 further comprising:
- at least one identifier section having an identifier related 15 to the special service label removably attached to the first sheet.
8. The special service mailing assembly of claim 1 further comprising:
- at least one identifier section having an identifier related 20 to the special service label removably attached to at least one of the anchor portions.
9. A method for mailing an article requiring a special service, the article having a front side and a back side, the method comprising the steps of:

- providing a first sheet;
- providing a second sheet directly attached to the first sheet having a first section integrally formed with a second section, the first section including a label having an adhesive back side indicative of the special service, and the second section including a form, a first anchor portion having an adhesive back side and a second anchor portion having an adhesive back side wherein the first anchor portion and the second anchor portion are located at opposite sides of the form, the form being independently detachable from the anchor portions and the label wherein the second sheet is removably attached to the first sheet by the adhesive back sides of the label, the first anchor portion and the second anchor portion;
- removing the second sheet from the first sheet;
- attaching the label to the front side of the article; and
- attaching the first anchor portion and the second anchor portion to the back side of the article.

* * * * *



US005524934A

United States Patent [19]

Schwan et al.

[11] Patent Number: **5,524,934**[45] Date of Patent: **Jun. 11, 1996**[54] **BUSINESS RECORD HAVING A
MULTICOLOR IMAGABLE SURFACE**[75] Inventors: **Joseph V. Schwan, Kettering; Mark D.
Dotson, Dayton, both of Ohio**[73] Assignee: **The Standard Register Company,
Dayton, Ohio**[21] Appl. No.: **312,424**[22] Filed: **Sep. 26, 1994****Related U.S. Application Data**

[63] Continuation of Ser. No. 55,576, May 3, 1993, abandoned.

[51] Int. Cl.⁶ **B42D 15/00; B41M 5/18**[52] U.S. Cl. **283/95; 283/114; 283/901;
428/913; 503/204**[58] Field of Search **283/61, 81, 114,
283/901, 903, 904, 94, 95; 503/200, 216,
204; 428/903**[56] **References Cited****U.S. PATENT DOCUMENTS**

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Primary Examiner—Peter Vo**Assistant Examiner—Khan V. Nguyen****Attorney, Agent, or Firm—Killworth Gottman, Hagan &
Schaeff**[57] **ABSTRACT**

A business record such as a form, tag, label or the like is provided in which different selected colored areas may be activated in a single pass through a printer. In one embodiment, coatings of initially colorless color formers and color developers are coated on selected areas of a substrate surface. The color formers and color developers combine upon exposure to an imaging force, such as heat or pressure, to form different colored visible areas on the sheet. In an alternative embodiment, the coatings of color formers and color developers are self-contained coatings having pressure-rupturable microcapsules containing either the color formers or said color developers.

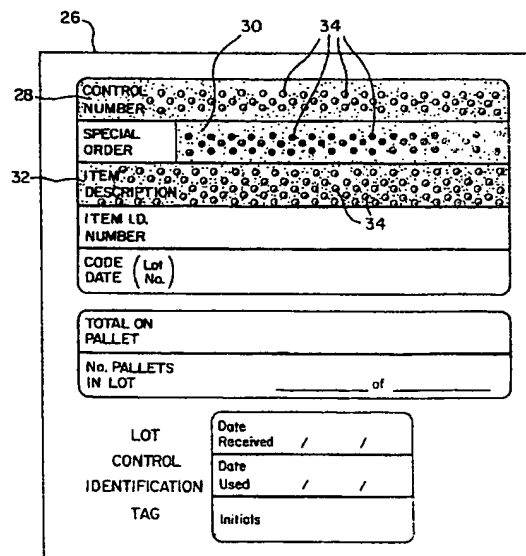
17 Claims, 4 Drawing Sheets**EXHIBIT C**

FIG-1

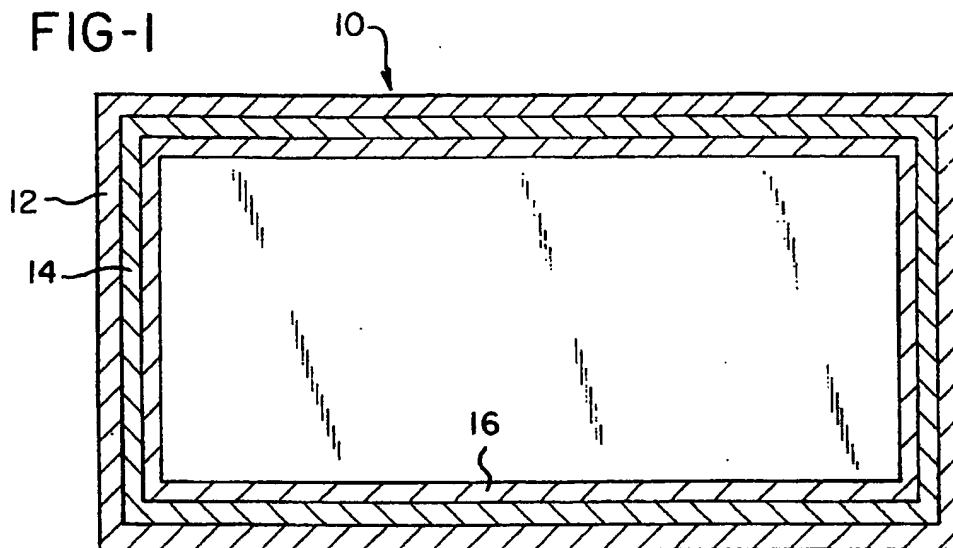


FIG-4

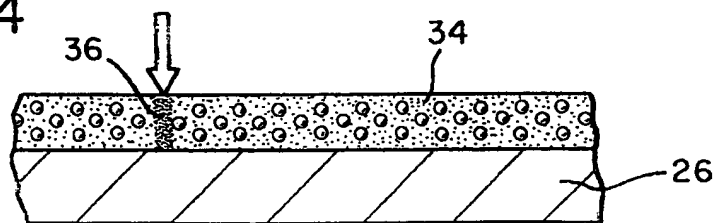


FIG-6

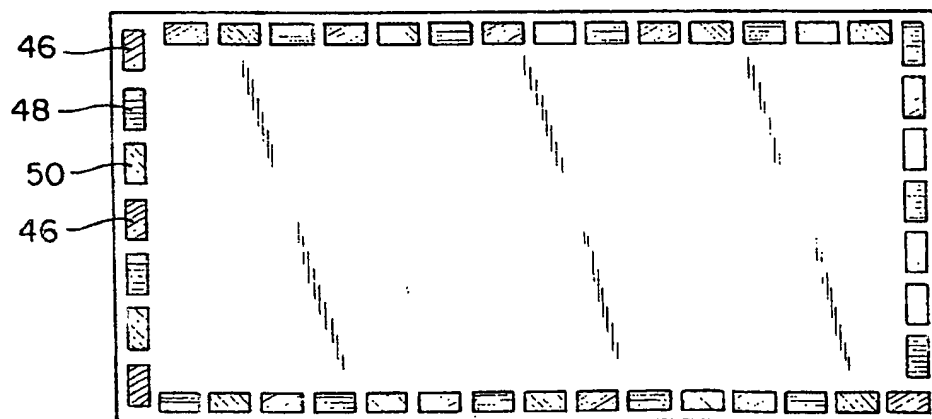


FIG-2

18

COMBINATION STATEMENT/
REMITTANCE MAILER

YOUR Company Name
Anywhere
USA

MO.	DAY	YR	REFERENCE	CHARGES	CREDITS	BALANCE
				20	22	24

STATEMENT
RETAIN THIS COPY

Pay This
Amount

\$

Account No.

FIG-3

26

28

30

34

32

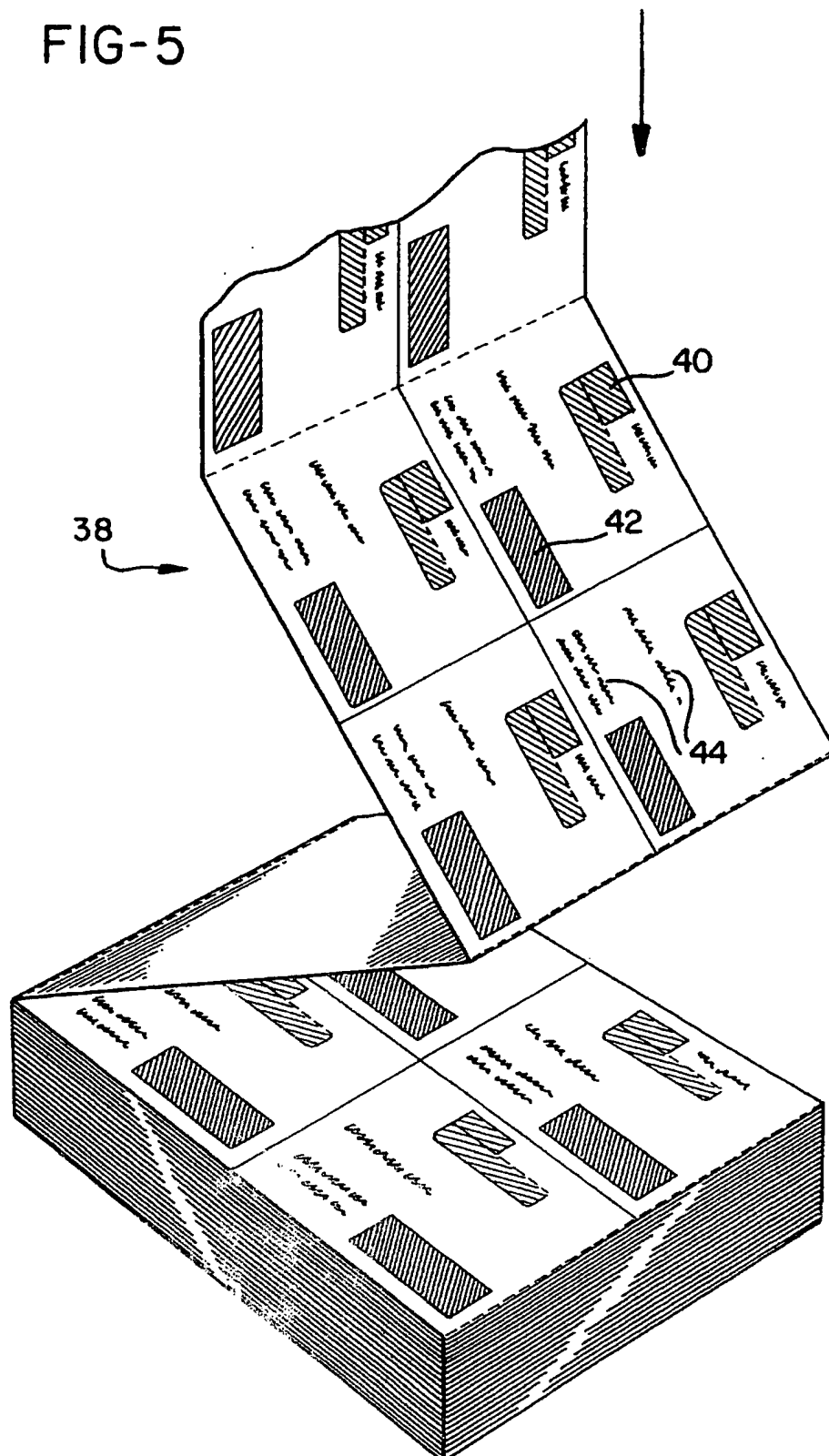
34

CONTROL NUMBER	
SPECIAL ORDER	
ITEM DESCRIPTION	
ITEM I.D. NUMBER	
CODE (Lot No.) DATE	
TOTAL ON PALLET	
No. PALLETS IN LOT _____ of _____	

LOT CONTROL IDENTIFICATION TAG

Date Received	/	/
Date Used	/	/
Initials		

FIG-5



BUSINESS RECORD HAVING A MULTICOLOR IMAGABLE SURFACE

This is a continuation of application Ser. No. 08/055,576,
filed May 3, 1993, abandoned.

BACKGROUND OF THE INVENTION

This invention relates to a business record, such as a form, label, tag, or the like, in which different selected areas may be color activated. More particularly, the invention relates to a sheet containing on its surface coatings of selected initially colorless color formers and color developers which, when subjected to heat or pressure, combine to form different colored areas on the sheet.

In the design and use of business forms, labels, tags, and the like, it is desirable to present information in an organized fashion so that information may be readily assimilated. For example, forms typically use headings or columns to identify different categories of information. Lines, rules, and screened areas are also used to delineate specific areas of information.

Color has also been used on business forms to delineate or differentiate information. For example, multipart forms, with each part being printed on different colored paper, have been in use for many years. The different color of each part of the form designates to whom that part is to be given or sent. Others have used different colored forms, labels, or tags to designate, for example, different methods of shipment of packages. As with multi-part forms, however, this method of designation requires that the user maintain an inventory of each different colored form, label, or tag.

To better differentiate categories of information, pre-printed screened background areas are often printed in selected colors. One known method used for producing different colors is to apply colored inks during the printing process when the forms are being manufactured. However, such a process requires a separate printing station for each color of ink used. In addition, if the techniques of process color are used, different shades or hues of color can only be produced by printing two or more colors in a superimposed relationship onto selected areas of the form.

In the field of product labeling, direct thermal printing has been a well-known means of non-impact printing. Direct thermal printers are capable of forming colored images by the application of heat to a substrate containing heat-reactive chemicals thereon. Typically, a substrate such as paper is coated with a coating of color forming and color developing reactants which, when heated, combine to form a visible color. When such a coated substrate passes under the print head of a thermal printer, selected areas containing the coating are activated by the heated print elements, forming colored images on the surface of the substrate.

Another method of printing colored images is by applying heat at different temperatures or by applying different quantities of thermal energy to a coated substrate. For example, Iiyama et al U.S. Pat. No. 4,665,410 teach a multi-color thermosensitive recording material formed by applying three or more successively overlaid thermosensitive coloring layers to a support material with intervening decolorizing agent containing layers. Each coloring layer yields a different color depending on the quantity of thermal energy applied. However, such coatings must be applied separately. Also, it is believed that separate printing passes are needed to activate selected colors.

It is also possible to achieve colored images from the use of self-contained carbonless coatings which produce colored images upon the application of pressure such as that from an impact printer. Such coatings are well known, and typically contain dispersed color developers and initially colorless leuco dyes contained in solution within microcapsules.

However, these methods do not presently provide a means for achieving different selected colored areas on a form, label, tag or the like by printing in a single pass. Accordingly, there still exists a need in the art for a business form, label, or the like having selected areas which produce selected colored areas when printed in a single pass through a direct thermal printer or an impact printing device.

SUMMARY OF THE INVENTION

The present invention meets that need by providing a business record such as a form, label, or tag having coatings of initially colorless color formers and color developers on selected areas which may be activated to produce a selected color or colors when imaged in a thermal printer or subjected to pressure or impact.

In accordance with one aspect of the invention, an imagable business record such as a form, label or tag is provided comprising a substrate such as a sheet having first and second surfaces. Preferably, the sheet includes on selected portions of the first surface means for forming areas of a plurality of different colors comprising coatings of initially colorless color formers and color developers. The color formers and color developers combine and form a colored area upon application of an imaging force. Such an imaging force may take the form of heat, pressure or a combination of heat and pressure.

In one embodiment, the color formers and color developers combine upon exposure to heat from a thermal print head to form colored visible areas including images, symbols, indicia, or the like on the sheet. Preferably, the color formers comprise initially colorless leuco dyes, while the color developers preferably comprise acidic phenolic compounds or resins. The color formers and developers are preferably contained in a binder matrix as separately dispersed particulate solids. Exposure of the coating to heat causes selected reactants to melt, permitting the color former and color developer to mix and react.

While it is possible to activate several areas so that multiple colors are formed on a document, it is also within the scope of the invention to activate selected portions of the coated areas which produce only one color. The coatings may be applied to a form, label, tag or the like in a number of different patterns. For example, the coatings may be applied only around the peripheral edges of a sheet. In one preferred embodiment of the invention, the outer peripheral area of the sheet is coated with a color former and color developer which form a first color, a middle peripheral area adjacent the outer peripheral area is coated with a color developer and color former which form a second color, and the inner peripheral area adjacent the middle peripheral area is coated with a color former and color developer which form a third color. In another embodiment of the invention, the different coatings may be coated in an alternating side-by-side relationship about the periphery of the record. By activating selected areas, the periphery can be made to show a selected color.

In another embodiment of the invention, the sheet includes a plurality of columns, with each of the columns being coated with a color former and color developer which form a different selected color.

In a further embodiment of the invention, a business record such as a form, label, or tag is provided having selected areas which may be activated to produce color upon the application of pressure, such as an impact printing device. A sheet is provided having first and second major surfaces. The first surface of the sheet includes on selected portions thereof means for forming areas of at least a plurality of different colors comprising self-contained coatings of pressure-rupturable microcapsules containing either the color formers or color developers. Again, the preferred color formers are initially colorless leuco dyes, while the preferred color developers are acidic phenolic resins. The color formers and color developers are adapted to be combined upon the application of pressure to rupture the microcapsules and to form different colored visible areas.

In an alternative embodiment, the self-contained coatings may comprise solvent-soluble colored dye particles along with dispersed microcapsules containing a solvent for the dye particles. Such a self-contained coating is disclosed in U.S. Pat. No. 5,039,652, and is incorporated herein by reference. When pressure is applied to the sheet, the capsules rupture and react with the dye particles to form colored visible areas.

It is also possible in the embodiments using self-contained coatings to activate selected areas of the sheet so that only one color is produced. The self-contained coatings may be coated in a number of different patterns as described above.

In yet another embodiment of the invention, a continuous web for producing a series of imitable business forms, labels or tags is provided in which different selected colored areas may be activated. The continuous web preferably includes first and second major surfaces. The first surface of the web includes on selected portions thereof means for forming areas of at least a plurality of different colors comprising coatings of initially colorless color formers and color developers, which, when exposed to heat from a thermal printer, combine to form colored visible areas. Alternatively, the coatings may comprise self-contained coatings which combine to form colored visible areas upon impact or pressure comprising either pressure-rupturable microcapsules containing color formers or color developers, or self-contained coatings of solvent soluble dye particles and solvent-containing microcapsules.

Accordingly, it is a feature of the present invention to provide a business record such as a form, label, tag, or the like having on selected areas of its surface coatings of initially colorless color formers and color developers which, when exposed to an imaging force, combine to form different colored visible areas. Other features and advantages of the invention will be apparent from the following description, the accompanying drawings, and the appended claims.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a plan view of a business form having selected activatable areas of color in accordance with the invention;

FIG. 2 is a plan view of a business form in accordance with another embodiment of the invention;

FIG. 3 is a plan view of a tag or label in accordance with another embodiment of the invention;

FIG. 4 is a fragmentary sectional view of a business form illustrating another embodiment of the present invention;

FIG. 5 is a perspective view of a continuous web of labels in accordance with the present invention; and

FIG. 6 is a plan view of a business form in accordance with another embodiment of the invention.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

The coatings utilized in the present invention may be applied to any document or record including business forms, labels, tags, or other documents in which it is desirable to selectively designate colored areas. The document may be paper or other printable material.

Suitable color formers for use in the present invention include colorless chromogenic dye precursors known in the art such as triphenyl methanes, diphenyl methanes, leuco dyes, xanthene compounds, thiazene compounds, and spiro-pyran compounds such as those described in U.S. Pat. No. 5,102,856, incorporated herein by reference. Many different shades or hues of color may be produced on a document by combining color formers which form blue, yellow, green and red colors. Black images may also be produced by using a combination of color formers. Preferably, the color formers comprise from about 5 to 15% by weight of the coating formulation.

The color developers may be selected from acidic color developers known in the art such as zinc salicylate, acetylated phenolic resins, salicylic acid modified phenolic resins, zincated phenolic resins, novolac type phenolic resins, and other monomolecular phenols such as bisphenol A, 4,4'-isopropylidene diphenol, 4,4'-sulfonyl diphenol, p,p' (1-methyl-n-hexylidene)diphenol, p-tert-butyl phenol, and p-phenyl phenol. The color developer is preferably present in the coating formulation from about 15 to 30% by weight.

In addition, the coating contains from about 40-70% by weight water, and from about 5 to 25% by weight of a sensitizer. Such sensitizers are low melting point solids which, when subjected to heat, melt and become solvents for the color forming and developing reactants. Suitable sensitizers include B-naphthol benzyl ether, p-benzyl biphenyl, ethylene glycol-m-tolyl ether, m-Terphenyl, Bis [2(4-methoxy) phenoxy] ether, and dibenzyl oxalate.

A binder is also included in the coatings to improve the rheological properties of the coating for better printability and to promote good adhesion of the coatings to the sheet surface. Suitable binders include starch, casein, polyvinyl alcohol, polyvinyl pyrrolidone, acrylamide/acrylate copolymers, carboxylated styrene butadiene latex, styrene acrylic latex, and mixtures thereof.

The coating formulation may also include from about 5 to 30% by weight of a pigment such as calcined clay, calcium carbonate, or plastic pigments.

Other optional ingredients include from about 5 to 25% by weight of a lubricant and from about 1 to 10% by weight of an anti-fading agent. Suitable lubricants include zinc stearate, stearamide, and wax. The anti-fading agent may comprise hindered phenols of the antioxidant class such as 1,1,3-tris(2-methyl-4-hydroxy-5-cyclohexylphenyl) propane.

The coatings are generally applied to the business record substrate by any suitable coating or printing process including flexographic or gravure printing techniques. The coatings may be applied in selected areas with the background blocks of background color, or they may be applied to form images, symbols, stripes, borders, and the like when passed through a thermal printer. Coatings which form different colors are preferably coated or printed on each desired portion of the document. The coatings are preferably applied at a dry coating weight of between about 0.50 and 2.50 lbs/17"x22"x500 sheet ream, and may be selectively printed or coated on the surface of stock papers during the manufacturing process.

If desired, the color former and color developer coatings may be overcoated with a protective coating composition which provides the subsequently printed colored areas on the substrate with resistance to solvents, abrasion and fading from exposure to light. Such a composition is disclosed in Mehta, U.S. Pat. No. 4,999,334, and is incorporated herein by reference.

If the color formers and color developers are applied as self-contained coatings for imaging by mechanical force as by pressure or impact, the coatings are preferably applied at a dry coating weight of between about 0.30 and 3.00 lbs/17"x22"x500 sheet ream. In this embodiment, the color former-containing microcapsules may be produced by any method known in the art; however, a preferred method of microencapsulation is disclosed in Seitz, U.S. Pat. No. 4,889,877, the disclosure of which is incorporated by reference.

With reference to the drawings, it must be appreciated that Patent Office requirements for solid black line drawings on a white surface make illustration of some of the subtleties of our invention relating to different colors difficult by the required Patent Office drawings alone. Reference to the following detailed description of the illustration will make full appreciation of the drawings and our invention possible.

As can be seen in the drawing figures, the color former and color developer coatings may be printed on selected portions of a document in a number of patterns, depending on the desired application. It should be appreciated that many different combinations for placement of the coatings on a document are possible and are within the scope of this invention.

Referring now to FIG. 1, a business record 10 is shown comprising a sheet having first and second surfaces. The first surface of the sheet includes selected portions 12, 14, and 16 around the periphery of the record containing coatings of initially colorless color formers and color developers. The outer peripheral area 12 of the sheet is coated with a color former and color developer which form a first color, the middle peripheral area 14 adjacent the outer peripheral area is coated with a color developer and color former which form a second color, and the inner peripheral area 16 adjacent the middle peripheral area is coated with a color former and color developer which form a third color.

As shown in FIG. 6, the coatings may also be applied in alternating side-by-side relationship about the periphery of the record. For example, block 46 is coated with a color former and color developer which form a first color, block 48 is coated with a color former and color developer which form a second color, and block 50 is coated with a color former and color developer which form a third color. Such an arrangement allows one color to be selectively activated around the boundary of the form to provide an indication of how the form is to be processed.

Direct thermal printers currently in use in the art include print heads or print bars with small heated elements which are individually addressable by digital input from a controlling computer. When the record is passed under the print head or print bar of a thermal printer, selected heated elements are activated and heat selected areas on the record. The coating in the selected areas is heated, causing at least one component of the coating to melt and permit the color formers and color developers to combine to form a visible color. For example, portion 12 of the document may include a coating which produces a red color, portion 14 may include a coating which produces a blue color, and portion 16 may include a coating which produces a yellow color. The

thermal printer can be programmed to activate all of the colors, or only selected colors. Both the colored areas and printed information on the record can be formed in a single printing pass. Thus, by selecting which colored area to activate, one can produce a color-coded document which imparts information to an end user. For example, the color of the document may be used as an indication of which department in an organization to which the document is to be routed. Additionally, the document may be in the form of a tag or label which is attached to an article or package, with the color providing an indication of method of shipment. The possible uses of the invention are many and varied.

FIG. 2 illustrates another embodiment of the invention in which a business record 18 includes columns 20, 22 and 24 which are color activatable areas. The first column 20 is coated with a color former and color developer which form a first color, the second column 22 is coated with a color former and color developer which form a second color, and the third column 24 is coated with a color former and color developer which form a third color. In this manner, different categories or types of information can be emphasized or delineated without having to use preprinted colored screened areas.

FIGS. 3 and 4 illustrate another embodiment of the invention in which a tag is provided having selected areas 28, 30 and 32 which may be activated to produce color upon the application of pressure. The tag 26 has been coated with self-contained coatings 34 comprising encapsulated color formers and color developers. As shown in FIG. 4, when an imaging force, indicated by the arrow, applies pressure to the surface of the document containing the self-contained coating 34, the color former and color developer combine to form a colored visible image 36 in the area beneath the imaging force. As shown in FIG. 3, area 28 is coated with a self contained coating which forms a first color, area 30 is coated with a self-contained coating which forms a second color, and area 32 is coated with a self-contained coating which forms a third color.

Alternatively, the coatings 34 may comprise solvent-containing microcapsules and solvent soluble colored dye particles. When the capsules are ruptured by an imaging force, the dye particles are dissolved by the released solvent to form a color. Such self-contained coatings usually produce a light colored tint before imaging. After the solvent-containing microcapsules are ruptured, more intense color is formed as dye particles are dissolved by the released solvent.

In another embodiment of the invention illustrated in FIG. 5, a continuous form 38 is shown which contains a series of labels which are coated in selected areas to create different colored areas when printed with a thermal printer. If desired, the web may be preprinted with nonvariable, repetitive information by automated equipment and then coated in selected areas with the present invention so that variable information may be printed in the color activatable areas. For example, as shown in FIG. 5, areas 44 contain preprinted information, area 40 is coated with a color former and color developer which forms a first color, and area 42 is coated with a color former and color developer which form a second color. Alternatively, the entire surface of the continuous form may be coated with self-contained coatings and printed using an impact printing device.

The invention provides the advantage that one form may be printed with several different activatable color combinations instead of using multi-ply labels or forms which require a different color for each ply. In addition, the invention provides a means of emphasizing or designating

different categories of information on a form without having to use preprinted colored screened areas which require separate printing stations. As the coatings are initially colorless, the entire record, form, label, or tag may be initially white, and only the information and colors required for that particular form can be activated. This permits the user to print color customized records as needed. Further, the invention has the advantage that both information and the colored areas on the document may be achieved by printing in a single pass through a thermal or impact printer.

Other uses for the present invention include airline tickets or event tickets. For example, different colors could be activated on an airline ticket to designate first class or coach seating. The invention could also be used for shipping labels in which different colors are activated to designate the method or location of shipment. Other potential uses for the present invention will be apparent to those skilled in the art.

In order that the invention may be more readily understood, reference is made to the following example which is intended to illustrate the invention, but not limit the scope thereof.

EXAMPLE 1

The following materials were combined to produce a preferred coating formulation:

	Weight %
Color former ¹	11.5
Color developer ²	12.0
Sensitizer ³	7.5
Binder ⁴	3.5
Water	46.5
Pigment ⁵	20.0

¹OBD-2 from Nagase America Corporation

²Bisphenol A from Nagase America Corporation

³m-Terphenyl from Nagase America Corporation

⁴Polyvinyl alcohol from Air Products Company

⁵Calcium carbonate from J. M. Huber Company

While certain representative embodiments and details have been shown for purposes of illustrating the invention, it will be apparent to those skilled in the art that various changes in the methods and apparatus disclosed herein may be made without departing from the scope of the invention, which is defined in the appended claims.

What is claimed is:

1. An imagable business record in which different selected areas may be activated to form colored areas comprising:

a substrate having first and second major surfaces, said first surface of said substrate including on selected areas thereof means for forming areas of a plurality of different colors, said means comprising initially colorless coatings of materials directly on said first surface of said substrate which, when activated by heat or pressure, form colored visible areas on said substrate.

2. The business record of claim 1 wherein said means for forming areas of a plurality of different colors comprises coatings of initially colorless color formers and color developers which combine to form the colored visible areas when exposed to an imaging force.

3. The business record of claim 2 wherein said colored visible areas include images, symbols, or indicia.

4. The business record of claim 1 wherein only one selected colored area is activated.

5. The business record of claim 1 wherein an outer peripheral area of said substrate is coated with a color former and color developer which form a first color, a middle peripheral area adjacent said outer peripheral area is coated with a color developer and color former which form a second color, and an inner peripheral area adjacent said middle peripheral area is coated with a color former and color developer which form a third color.

6. The business record of claim 1 wherein said substrate includes a plurality of columns, wherein each of said columns is coated with a color former and color developer which form a different selected color.

7. The business record of claim 1 comprising a continuous web for producing a series of imagable business records.

8. The business record of claim 1 wherein said initially colorless coatings comprise self-contained coatings of color formers and color developers in which either said color formers or said color developers are contained in pressure rupturable microcapsules.

9. The business record of claim 8 wherein only one selected colored area is activated.

10. The business record of claim 8 wherein an outer peripheral area of said substrate is coated with a self-contained coating which forms a first color, a middle peripheral area adjacent said outer peripheral area is coated with a self-contained coating which forms a second color, and an inner peripheral area adjacent said middle peripheral area is coated with a self-contained coating which forms a third color.

11. The business record of claim 8 wherein said substrate includes a plurality of columns, wherein each of said columns is coated with a self-contained coating which forms a different selected color.

12. The business record of claim 8 comprising a continuous web for producing a series of imagable business records.

13. The imagable business record of claim 1 in which said initially colorless coatings of materials comprise color formers and color developers which combine to form colored visible areas upon the application of heat.

14. An imagable business record in which different selected colorless areas may be activated to form different colored areas, said record comprising:

a substrate having first and second major surfaces, said first surface of said substrate including on selected portions thereof means for forming areas of a plurality of different colors, said means comprising initially colorless coatings of materials on said substrate which, when activated by an imaging force, form colored visible areas on said substrate.

15. The business record of claim 14 wherein said means for forming areas of a plurality of different colors comprises initially colorless self-contained coatings of solvent-containing microcapsules and dye particles which solvent-containing microcapsules rupture when an imaging force is applied on said substrate such that the solvent is released and reacts with said dye particles to form the colored visible areas.

16. The business record of claim 14 wherein only one selected colored area is activated.

17. The business record of claim 14 comprising a continuous web for producing a series of imagable business records.

United States Patent [19]

Walz

[11] Patent Number: 5,664,725

[45] Date of Patent: *Sep. 9, 1997

[54] MAILING FORM

[75] Inventor: Gerard F. Walz, Fallbrook, Calif.

[73] Assignee: Walz Postal Solutions, Inc., Fallbrook, Calif.

[*] Notice: The term of this patent shall not extend beyond the expiration date of Pat. No. 5,501,393.

[21] Appl. No.: 610,497

[22] Filed: Mar. 4, 1996

Related U.S. Application Data

[63] Continuation-in-part of Ser. No. 227,513, Apr. 14, 1994, Pat. No. 5,501,393.

[51] Int. Cl.⁶ B65D 27/06

[52] U.S. Cl. 229/92; 229/92.8; 229/300; 40/638

[58] Field of Search 229/92.8, 300, 229/92; 40/638

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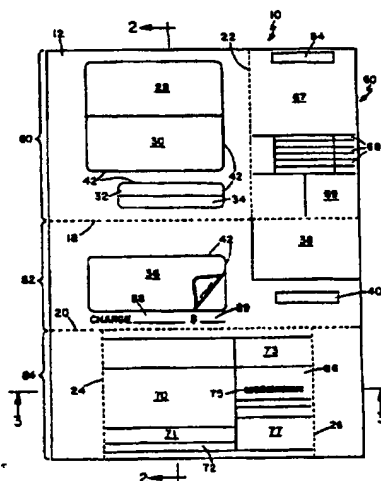
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Attorney, Agent, or Firm—Brown, Martin, Haller & McClain

[57] ABSTRACT

A multi-part mailing form has two superimposed sheets of material such as paper stock which are secured together in adhered areas by an adhesive layer between the sheets. The inner face of a lower sheet is coated with a non-adhesive material in certain areas so that the sheets are not adhered in these areas. The coated areas of the lower sheet correspond to detachable areas of the upper sheet which can be detached and secured to an item to be mailed. Sections of the form are separable from one another by cutting or by means of tear lines. One of the separable sections has imprinted indicia on the outer face of each sheet and includes a return postcard for confirming receipt of a mailed item.

22 Claims, 6 Drawing Sheets



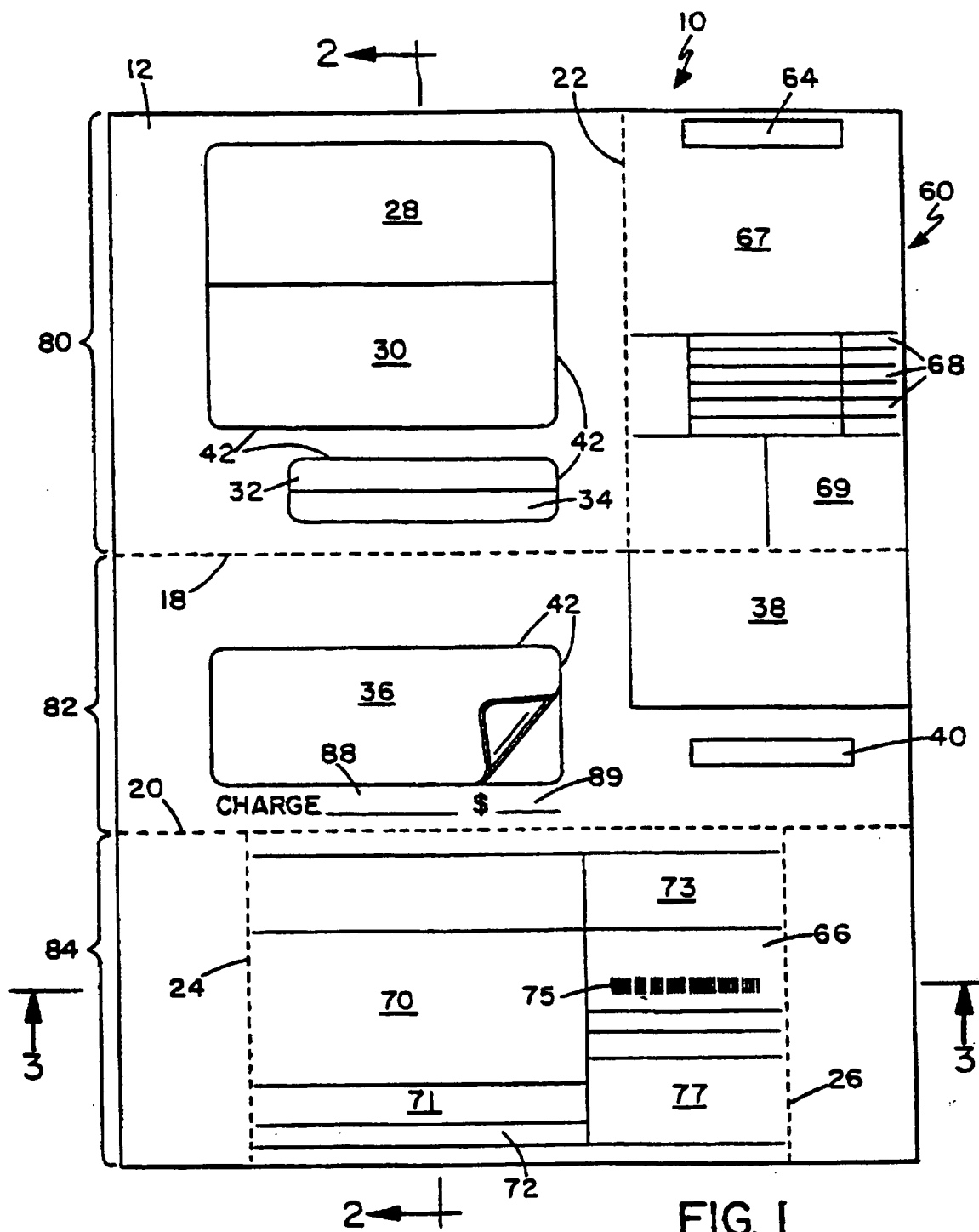


FIG. 1

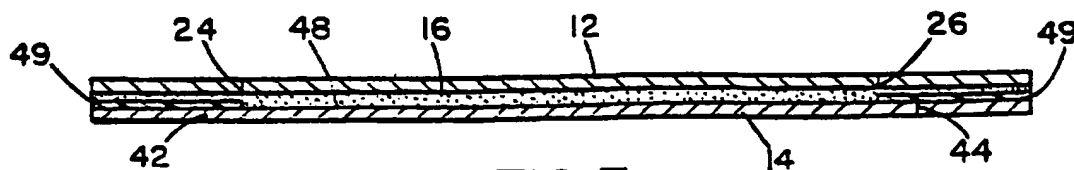


FIG. 3

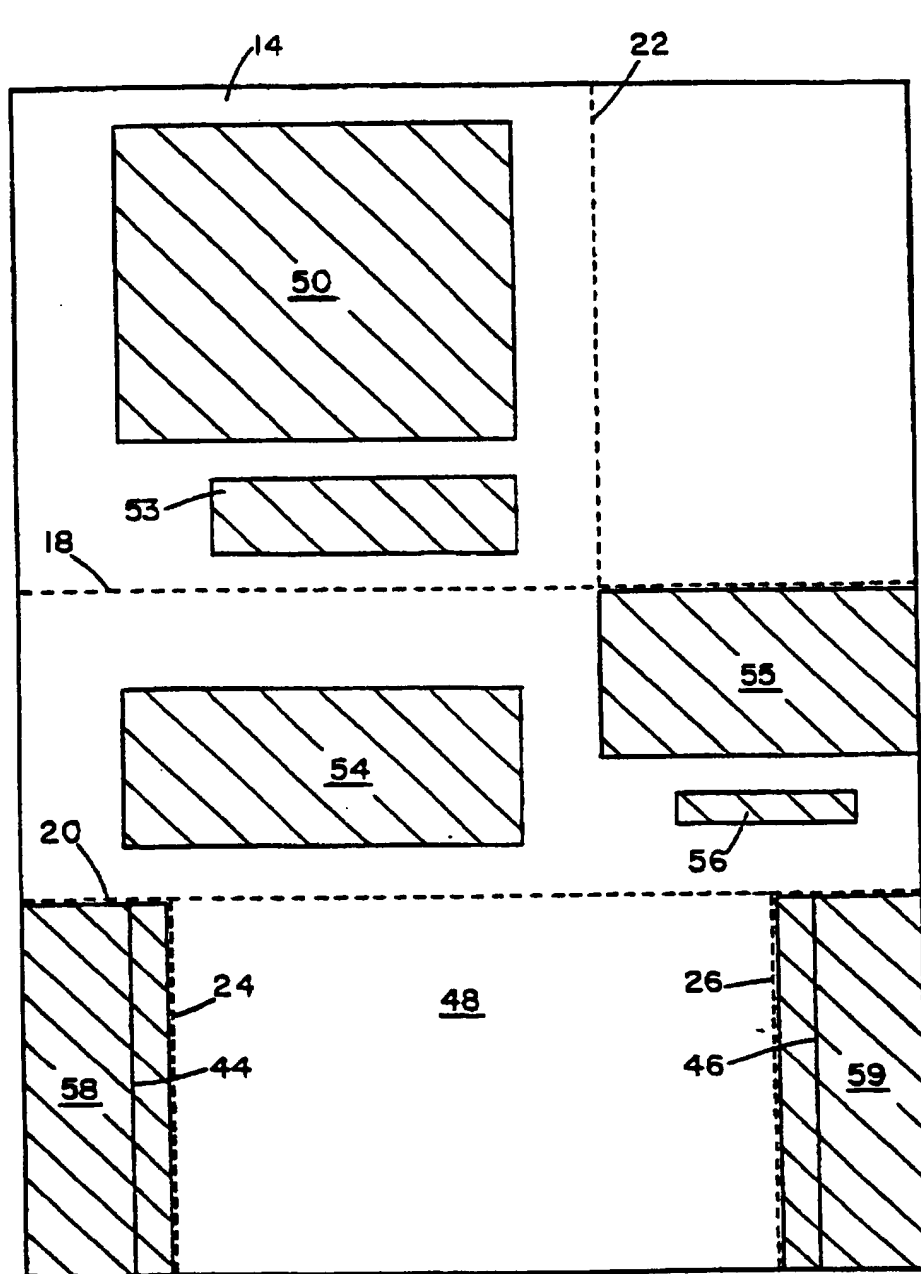


FIG. 4

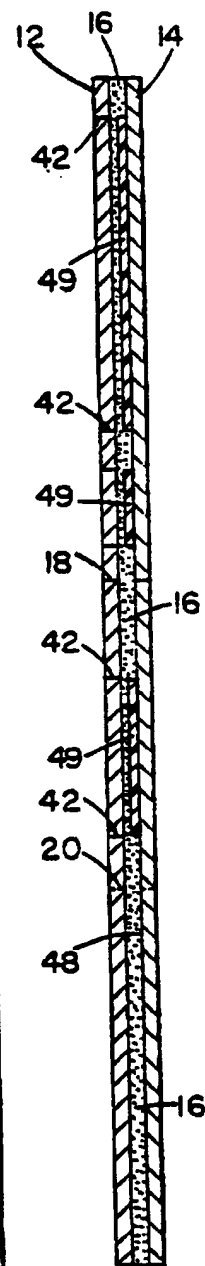


FIG. 2

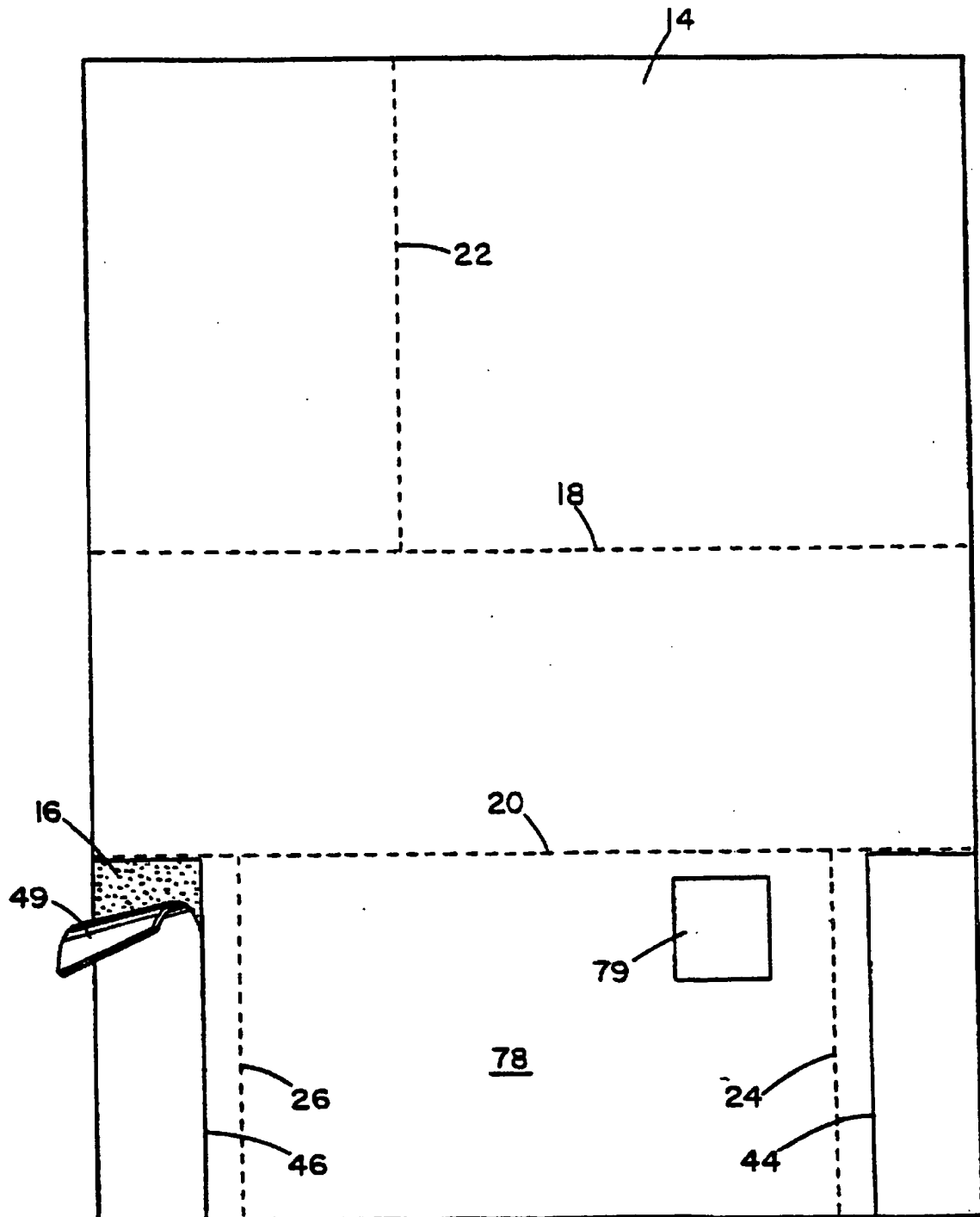


FIG. 5

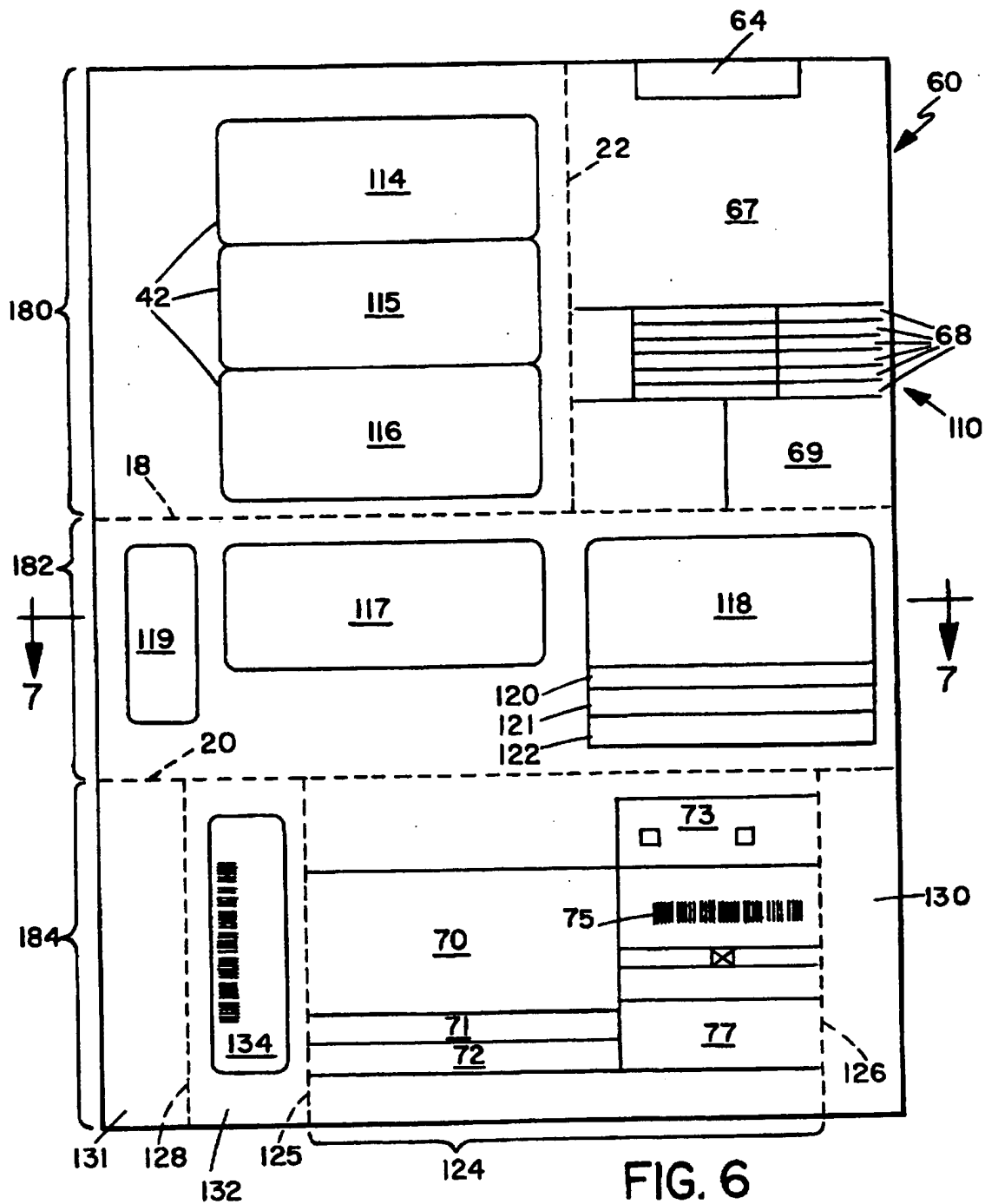


FIG. 6

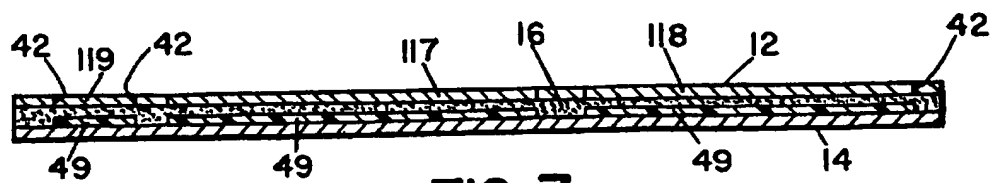
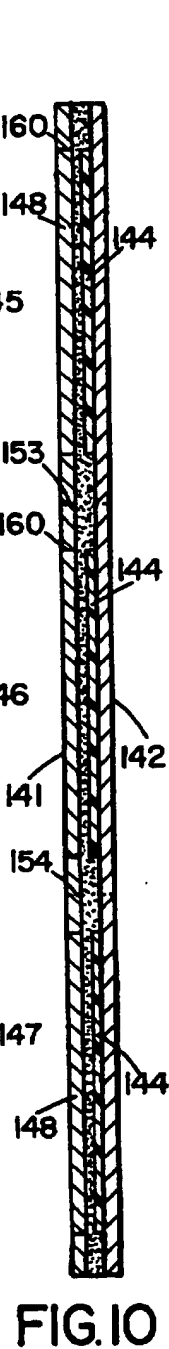
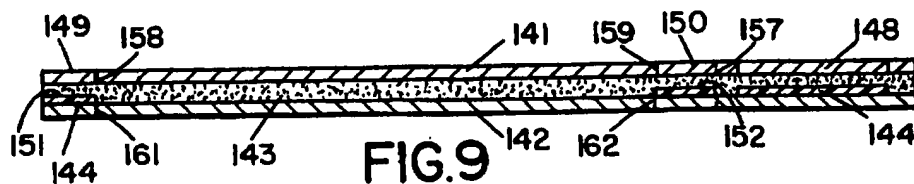
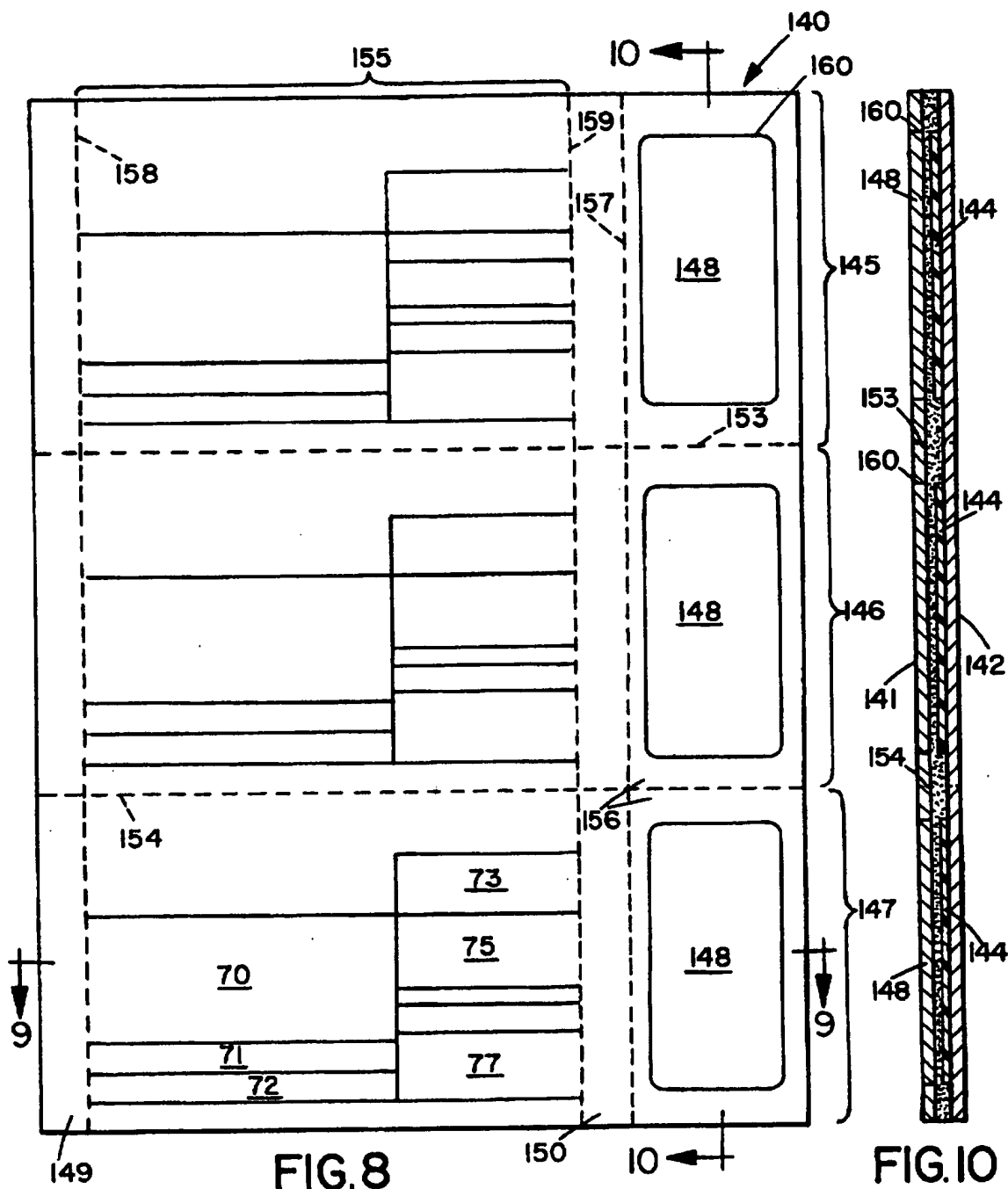


FIG. 7



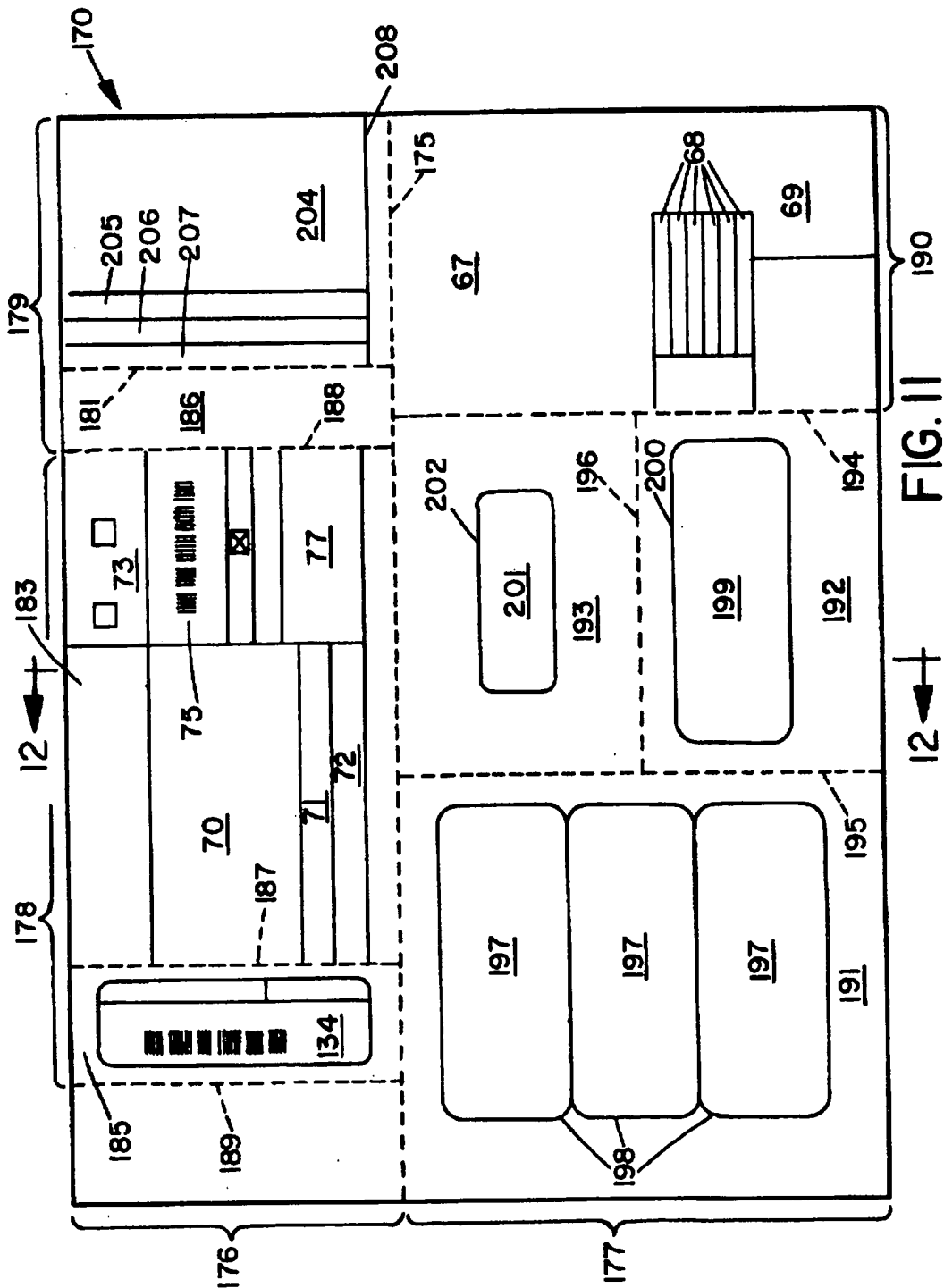


FIG. 12

FIG. 11

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MAILING FORM

CROSS-REFERENCES TO RELATED APPLICATIONS

This application is a continuation-in-part of application Ser. No. 08/227,513 filed Apr. 14, 1994, now U.S. Pat. No. 5,501,393.

BACKGROUND OF THE INVENTION

The present invention relates generally to multi-part mailing forms for use by businesses in mailing items to various customers or clients and in keeping records of such mailings, and is particularly concerned with forms for use in certain specific types of mailing such as certified and registered mail procedures.

In my U.S. Pat. No. 4,682,793 a mailing form is described which is designed to meet U.S. Post office certified mail requirements. The form has multiple layers which include all the paperwork necessary to prepare a mailing label, customer receipt and return receipt for each item mailed. A series of forms can be run through a printer to provide paperwork for certified mailing of a plurality of items, considerably reducing the time and effort required for such mailings in a typical business environment.

My U.S. Pat. No. 5,190,210 describes another multi-part mailing form which is a single sheet with detachable areas corresponding to various forms for use in certified, registered and other special types of mailing services. The forms include an addressee region with a blow on label, a detachable identifying number label, and a detachable return postcard. This form is suitable for registered mailing and similar procedures, and can be used in an automated mailing preparation system using a computer to print a series of forms.

One problem with previous registered mailing forms is that the return postcard is normally of relatively thick card stock which may not be suitable for all printer feeds, such as laser printers, for example. However, paper stock is typically too thin to meet Post Office requirements for return receipt postcards, which must normally be of the order of around 9 mil. thickness.

SUMMARY OF THE INVENTION

It is an object of the present invention to provide a new and improved mailing form.

According to the present invention, a mailing form is provided which comprises two sheets of material, preferably paper stock, each sheet with an inner face facing the other sheet and an outer face, a first one of the sheets having a plurality of detachable areas which are detachable from the remainder of the first sheet, an adhesive layer between the sheets for permanently securing the sheets together over predetermined, adhered areas of the form, the second sheet having a non-adhesive coating on its inner face in predetermined, non-adhered areas which are aligned with the detachable areas so that the detachable areas do not adhere to the second sheet, one of the predetermined, adhered areas of the form where the sheets are permanently secured together comprising a detachable form part, each sheet having predetermined printed indicia on its outer face in said one predetermined, adhered area corresponding to the detachable form part.

In the preferred embodiment of the invention, the predetermined, adhered area comprises a return postcard for confirmation of receipt of a mailed item, and the predeter-

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mined indicia include marked areas for receiving predetermined information concerning a mailed item, one of the marked areas on the outer face of one of the sheets comprising a designated addressee area for receiving the address to which the item is to be mailed and another of the areas on the outer face of the other sheet comprising a return address area for receiving the address of the sender of the item. The two sheets have a predetermined combined thickness corresponding to Post Office minimum thickness requirements for return postcards associated with various mailing procedures, such as certified and registered mail. The two sheets may be of equal thickness, or one may be thicker than the other.

Preferably, the detachable areas in the first sheet include labels which are die cut around at least the majority of their periphery for easy detachment from the remainder of the form. The detachable label areas may include at least one blank address label on which an address may be imprinted prior to detachment from the form and attachment to an item to be mailed. Additional blank address labels may be provided for records purposes and for attachment to other items to be mailed, such as a simultaneous mailing of the same item by both certified and regular first class mail.

The form also includes an imprinted receipt area which can be detached from the remainder of the form, and an imprinted identifying label carrying an item number for the item being mailed, for use in tracking the item.

This form can be used in laser printers and avoids the problems of using card stock as part of a form in such printers. The form is relatively inexpensive and is both convenient and easy to use both in preparing items for procedures such as certified mailing and in providing hard copy records of such mailings.

BRIEF DESCRIPTION OF THE DRAWINGS

The present invention will be better understood from the following detailed description of some preferred embodiments of the invention, taken in conjunction with the accompanying drawings, in which like reference numerals refer to like parts, and in which:

FIG. 1 is a top plan view of a form according to a first embodiment of the invention;

FIG. 2 is a section on the lines 2—2 of FIG. 1;

FIG. 3 is a section on the lines 3—3 of FIG. 1;

FIG. 4 is a top plan view of the inner face of the lower sheet of the form;

FIG. 5 is a plan view of the rear face of the form;

FIG. 6 is a top plan view of a form according to a second embodiment of the invention;

FIG. 7 is a section on the lines 7—7 of FIG. 6;

FIG. 8 is a top plan view of a form according to a third embodiment of the invention;

FIG. 9 is a section on the lines 9—9 of FIG. 8;

FIG. 10 is a section on the lines 10—10 of FIG. 9;

FIG. 11 is a top plan view of a form according to another embodiment of the invention; and

FIG. 12 is a section on the lines 12—12 of FIG. 11.

DESCRIPTION OF THE PREFERRED EMBODIMENTS

FIGS. 1—5 of the drawings illustrate a single, multi-part mailing form 10 for use in mailing and record keeping procedures, such as certified or registered mail. The form 10

may be provided in a single sheet format as illustrated, or as a continuous length of forms 10 detachably secured together via transverse lines of perforations between adjacent form lengths, depending on the type of printer to be used. A single sheet format is typically used for laser printers.

The form comprises two sheets of relatively thin sheet material such as paper stock or lightweight card stock such as a lightweight tag. Upper sheet 12 and lower sheet 14 have an adhesive layer 16 between them for adhering the upper sheet to the lower sheet in certain areas, as best illustrated in FIGS. 2 and 3. The upper sheet may be paper and the lower sheet card, or vice versa, or both sheets may be paper. Transversely and longitudinally extending lines of perforations 18, 20, 22, 24 and 26 extend through both sheets for separating the form into various form parts. Transverse lines 18 and 20 separate the form into three basic sections, 80, 82 and 84. Additionally, the upper sheet has detachable label areas 28, 30, 32, 34, 36, 38 and 40 which are die cut along die cut lines 42 extending around all or part of their respective peripheries, as illustrated in FIGS. 1, 2 and 3. The lower sheet has a pair of die cut lines 44, 46 extending parallel to but spaced from the perforated lines 24 and 26.

As best illustrated in FIGS. 2-4, the inner surface 48 of the lower sheet is treated or coated in certain areas 50, 53, 54, 55, 56, 58 and 59 with a non-adhesive or so-called release coating material 49 such as silicone gel material, which prevents the lower sheet from strongly adhering to the upper sheet in these areas. Area 50 corresponds with the two label areas 28 and 30, and area 54 corresponds to label area 36 of the upper sheet. Non-adhesive area 53 corresponds to the two label areas 32 and 34 of the upper sheet. Areas 55 and 56 correspond to the label areas 38 and 40, respectively. Non-adhesive area 58 extends from perforated line 24 out to the outer edge of the sheet, and from perforated line 20 down to the lower edge of the sheet. Similarly, non-adhesive area 59 extends from perforated line 26 out to the outer edge of the sheet and from line 20 down to the lower edge of the sheet. Thus, the upper and lower sheets adhere together permanently in all regions of the lower sheet which are not treated with non-adhesive material.

The adhesive material between the sheets is preferably a pressure sensitive adhesive which adheres the sheets together where the lower sheet has not been coated with non-adhesive material. All of the label areas can be detached or peeled away from the remainder of the form via the die cut lines, since they will not be adhered, or will adhere only lightly, to the lower sheet. The corner of label area 36 is shown partially peeled away from the remainder of the form in FIG. 1, for example. The undersurface of the label area 36 will be coated with adhesive material 16 and will not be adhered to the underlying non-adhesive material 49 coating the underlying area 54 of the lower sheet. All label areas can be peeled away from the form in a similar manner as needed. Additionally, side strips of the lower sheet outside die cut lines 44 and 46 can also be peeled away from the upper sheet, as indicated in FIG. 5.

Some of the label areas and some other regions of the form are blank for user entry of information via a laser printer or the like hooked up to a computer having a database of customer or client information, for example. Thus, label 28 is blank and comprises an address label for receiving an address to which an item is to be mailed. Label 30 comprises another blank address label for receiving the same address. This can be used in those situations where the same item of mail is to be sent in two different ways, for example via both certified mail and via first class mail. Another blank address label 36 can be used for keeping records of items mailed, for

example in a postal log book or U.S. Postal Service (USPS) Firm Mailing Book (3877). This label can be detached and adhered to the Firm Mailing Book at the mailing center, as a record of the mailing.

Other label areas carry pre-printed indicia. Label 38 carries an article number for use by the Post Office in mail tracking. Preferably, the label is the article number label of the required Post Office format and backing color for that particular service (e.g. green for certified mail). However, other formats may be used for alternative mailing procedures. The same article number is imprinted on the small label strip 40, and is also imprinted on the lower section 84 of the form, in region 66, and on a detachable part 60 of the form, in region 64. Form part 60 is detachable from the remainder of the form via lines of perforations 18 and 22 and is of two sheet thickness, consisting of equivalent parts of both sheets adhered together via adhesive material 16. Detachable two sheet part 60 has the format of a Post Office certified mail receipt form, such as PS Form 3800, and includes a blank area 67 for entering the addressee/reference information, and areas 68 for entry of various postal fees, as well as a postmark receiving area 69 as confirmation of mailing.

The entire lower section 84 of the form below perforated line 20 comprises a return postcard of the type which is attached to an item to be mailed until received by the addressee, and then returned to the sender as confirmation of receipt. The Post Office has typically required that such return postcards be of card stock having a thickness of 0.009 inches, which is difficult or impossible to use in modern printers such as laser printers. However, new Post Office regulations indicate that a minimum thickness of 0.007 inches may be sufficient in some cases. By forming the return postcard of two sheets of paper which are bonded together, it will have sufficient strength and thickness to meet Post Office requirements for return postcards in most cases. At the same time, there will be no restriction on the type of printer and the form can be completed using a laser printer.

In the illustrated embodiment, detachable section 84 comprises a Post Office return receipt form PS 3811. The front sheet of section 84 includes various pre-printed regions between perforated lines 24 and 26. These comprise an area 70 for receiving the address to which the item is to be mailed, as well as areas 71, 72 for receiving signatures of the addressee and agent, area 73 for indicating other services requested, such as addressee's address and restricted delivery, area 66 carrying the article number in OCR-A font and a corresponding bar coded article number 75, area 76 for entering the date of delivery, and area 77 for entering a new address if the addressee has moved and this service has been requested and paid for. The regions outside lines 24 and 26 may be blank or may contain other pre-printed information.

As best illustrated in FIG. 5, the rear face of the form part or section 84 includes a return address area 78, which is preferably pre-printed with the user's address, between lines 24 and 26, as well as a pre-printed postal indicia area 79 in the upper right-hand corner. Where the return address is not pre-printed, one of the three address labels may be printed with the return address and affixed to region 78. As has been noted above, the front sheet and rear sheet are only adhered together in the return postcard part of the form in the region between tear lines 24 and 26. The two side portions outside this area are not adhered together. Strips of the rear sheet portion of the form outside die cut lines 44 and 46 can therefore be peeled away, as indicated in FIG. 5, in order to expose the adhesive layer 16 on the rear surface of the front

sheet. This leaves two exposed strips of adhesive on each side of the return postcard, by postcard of which the return postcard can be adhered to an item to be mailed.

The upper section 80 of the form is separable along tear line 18 and includes the addressee labels 28 and 30, two smaller labels 32 and 34 for attachment to an envelope or other piece of mail when certain specialized services are requested and paid for, and a receipt 60 for proof of certified mailing. Label 32 may be imprinted with the words "addressee's address," for example, and is attached to an item of mail when the sender has requested and paid for information regarding an addressee's new address when a mail forwarding order has been placed. Label 34 may be imprinted with the words "restricted delivery" for use when an item of mail is to be given to the addressee only, and not to any other individual who may reside at the same address. The appropriate boxes will be checked in region 73 of the return postcard 62 when either of these services is to be used.

The central section 82 of the form carries the certified mail number label 38, as well as addressee label 36 for use by the sender as a mailing record, and a small strip label 40 which carries the same mail item number as label 38. Label 40 may be used in a number of ways. For example, it may be affixed to a copy of the letter sent, attached to the USPS Firm Mailing Book adjacent the address label 36, or used to identify an item for charge back purposes. Section 82 of the form is designed so that it may be used for charging back postage to a customer. It includes a blank area 88 for entry of the name of the person or entity to be charged, and a blank area 89 for entry of the total postage and fees for mailing the item. If this section is to be used for charge back, the entire section is detached from the remainder of the form after the blank areas of the form have all been completed, and section 82 is then forwarded to the billing department for billing to the client or customer.

As noted above, the lower section 84 of the form is the return postcard for signature by the addressee on delivery. After signature, the central portion of the form is detached along lines 24 and 26 and mailed back to the sender in the usual way.

Each sheet 12 and 14 is preferably of paper stock and the two sheets have a combined thickness of 0.007 to 0.010 inches, depending on Post Office rules regarding the minimum thickness for return postcards used in certified and registered mailing and the like. The sheets may be of equal thickness, for example each may be of 0.0045 inch paper stock, or one sheet may be thicker than the other. The label carrying front or top sheet 12 may be thinner than the rear sheet, for example, so that the rear sheet is heavier and provides support for the removable labels. The ratio in thickness may be 40% for the top sheet and 60% for the bottom sheet, for example, depending on printer requirements. Alternatively, the top sheet may be thicker, providing thicker labels and reducing the tendency of labels to curl when peeled off.

The die cut lines for allowing the labels to be separated from the remainder of the form may have ties or unscored regions in their length to ensure that the labels do not separate in the printer and cause a paper jam. This is achieved by providing indents or cut outs in the knife edge for scoring the paper, the indents having a depth equal to the paper thickness, so that the die cut lines will have short gaps or uncut portions in their length. The tear lines and die cut lines are cut after the two sheets have been secured together via the adhesive layer.

The procedure for using forms 10 in a mailing preparation system using a computer and single sheet printer such as a

laser printer will now be described in more detail. A stack of forms 10 will first be loaded into the printer. The user then enters a list of names and addresses to which items are to be mailed, either manually via the computer keyboard or using a previously created data base. The various postage fees depending on weight of the items to be mailed and the type of postage service or services requested may also be entered manually at the keyboard or via a previously created data-base. The computer will be programmed to enter the first name and address on blank labels 28, 30 and 36 as well as in the blank area 70 of the return postcard if desired, an account number may also be entered on each address label. The computer will also be programmed to enter the various postage fees in areas 68 of the receipt portion of the form, depending on the selected services and item weight, and to mark the relevant boxes in region 73 of the return postcard part of the form if the associated services are to be requested. The computer is also programmed to fill out charge back information in section 82 of the form if this section is to be used for accounting purposes. The same procedure is carried out for subsequent forms in the stack.

Once the forms are completed, each form is used for mailing an item as follows. First, the address label 28 is peeled off the form and adhered to the item to be mailed. If a confirmation copy of the letter or item is to be sent via regular first class mail, address label 30 is detached and adhered to the envelope containing the confirmation copy. Preferably, the receipt 60 and mail number label 38 are detached together from the form, by peeling label 38 away from the rear sheet and detaching receipt 60 along tear line 22 of both the front and rear sheets and along tear line 18 of the rear sheet only. Thus, label 38 remains attached to the receipt 60 along tear line 18 of the front sheet. The label 38 is then adhered to the item to be mailed along with the receipt 60 for easy transport to the Post Office for date stamping.

The return postcard is detached from the remainder of the form along tear line 20. Strips of the rear sheet outside die cut lines 44, 46 are then peeled away, as indicated in FIG. 5, and the postcard is adhered to the item to be mailed via the exposed marginal regions of adhesive 16 underneath the removed strips. If the optional services identified in labels 32 and/or 34 are to be used, these labels are also peeled away and attached to the item to be mailed.

The central portion 82 of the form is then detached from the remaining part of the top portion 80 along tear line 18. The remaining part of top portion 80 can be discarded. The central portion can be used optionally for a mailing record in a postal log book or USPS "Firm Mailing Book" (3877), or for charging postal fees to a client. In the former case, the portion 82 is clipped to the item to be mailed via a paper clip or the like, and the completed item is sent to the mail room. Mail room personnel can then peel away labels 36 and 40 and attach them to the Postal Log Book as a record of mailing.

Alternatively, where portion 82 is to be used for billing purposes, the "Charge To" and "\$" fields are filled in by the sender, and this portion is then sent to the billing department for appropriate processing.

The item is then ready for mailing. At the Post Office, the receipt 60 will be date stamped in area 69 with the date delivered to the post office, and will then be removed from the certified mail label via perforated line 18 and returned to the sender for proof of delivery into the postal system.

When the item is delivered to the addressee, the addressee signs the return postcard in area 71, and the postal service

agent signs in area 72. The postcard is then removed from the item via tear lines 24 and 26, and returned to the sender as confirmation of receipt of the item by the addressee.

FIGS. 6 and 7 illustrate a modified, multi-part mailing form 110 according to a second embodiment of the invention. This form is similar to that of FIGS. 1-5, and like reference numerals have been used for like parts as appropriate. However, the labels are arranged differently and the form has a lower, return receipt portion with an extra side portion and label, as explained in detail below.

As in the first embodiment, the form 110 comprises two sheets 12,14 of relatively thin sheet material such as paper stock or lightweight card stock which does not exceed the maximum thickness for a laser printer. Upper sheet 12 and lower sheet 14 have a layer 16 of adhesive between them for permanently adhering the upper sheet to the lower sheet in some areas, such as the receipt portion 69 in the upper right-hand corner of the form. Transverse lines 18 and 20 separate the form into three basic sections 180,182 and 184, as in the first embodiment. Lines 18 and 20 may be lines of perforations, as illustrated. Alternatively, the form may be separated into three parts by an automatic cutting and stacking machine, such as the Speedy Cutter of Moore, Inc., in which case it need not have lines of perforations, but will simply be cut along the lines 18 and 20 automatically after printing is complete.

The upper sheet has certain detachable label areas which are aligned with corresponding areas of the lower sheet which are coated with a suitable non-adhesive release coating material 49 such as silicone gel material or the like, which prevents adhesive 16 from adhering to the lower sheet. The label areas differ from the first embodiment, and include three identical address label areas 114,115,116 in the upper portion 180 of the form. The middle portion 182 of the form includes an address label 117, a first label 118 carrying the Post Office article number for attaching to an item of mail in the conventional manner, a second label 119 carrying the same number for the sender's records, and three narrow labels 120,121,122 carrying informational indicia such as "Return Receipt Requested", "Addressee's Address" and "Restricted Delivery", for informing the post office carrier of the conditions under which the item is to be delivered. The first label 118 may also be imprinted with a patch of suitable identifying compound or ink, such as taggant ink, which can be used in automatic mail sorting machines to pick out certified mail items.

The lower, return receipt portion 184 differs slightly from portion 84 of the first embodiment since the return postcard portion 124 between tear lines 125,126 is not centrally positioned, but is offset to one side of the form, so that the section to the left of tear line 125 is wider than the strip or section of the right of tear line 126. The return postcard portion has the same printed indicia and sections 70,71,72, 73,75 and 77 as in the first embodiment. An additional vertical tear line 128 is provided between tear line 125 and the left-hand edge of the form. The area of side strip 130 to the right of tear line 126 and the area of side strip 131 to the left of tear line 128 overlies underlying strip areas of lower sheet 14 which are coated with non-adhesive coating material 49, so that the lower sheet can be peeled away in the strip regions outside tear lines 126 and 128, and the side strips can then be adhered to an item to be mailed. The additional strip region 132 located between tear lines 125 and 128 includes a peel off label 134 which is aligned with a corresponding underlying area of the second sheet which is coated with the non-adhesive coating material. Label 134 may comprise a U.S. Postal Service control label for letter carrier use,

carrying the article identification number as well as spaces for receiving the date and sender's name. This can be affixed to a postal service form of the type used to notify a recipient that an attempt was made to deliver a certified mail item, and to inform the recipient where they can pick up the item.

As in the previous embodiment, the detachable areas of the front sheet can be peeled away from the rear sheet because of the non-adhesive coating aligned with these areas, and can be detached from the remainder of the front sheet by means of suitable die cut lines 42 or lines of perforations 126,128 in the case of the side strips 130,131. Additionally, as in the first embodiment, the receipt portion 67 is detachable from the remainder of the form via tear line 22 in addition to tear line 18.

The rear face of the form 110 will be similar to that illustrated in FIG. 5 for the first embodiment, except for the off-center positioning of the return postcard section 124 and the additional side strip 132. The rear sheet can be peeled away from the side strips 130,131 up to the lines of perforations 126,128, and the adhesive backing on strips 130,131 is then used as in the previous embodiments to adhere the return postcard to an item being mailed. On receipt by the addressee, the return postcard portion 124 is detached along the lines of perforations 125 and 128, and the card is mailed back to the sender to confirm receipt.

The form 110 will be manufactured and used in an equivalent manner to that of the first embodiment described above, with the only differences being the provision of additional address label 116 in the upper form portion, the slightly different layout in the central form portion, and the addition of side strip 132 and label 134 in the lower form portion including the return postcard.

FIGS. 8-10 illustrate a mailing form 140 according to another embodiment of the invention, which is designed for situations where no mailing labels or receipts are required. Form 140 is also made from two sheets 141,142 of relatively thin sheet material such as paper stock or lightweight card stock such as lightweight tag. As in the previous embodiments, the rear surface of upper sheet 141 is coated with a layer of adhesive 143, while the upper surface of the lower sheet 142 is coated with a non-adhesive or release coating material 144 in certain areas which are aligned with predetermined detachable or peel-away areas of the upper sheet. The form 140 consists of three identical form parts 145,146,147, each of which has a detachable label 148 which carries a Post Office identifying number, such as a certified mail tracking number. Each form part also includes side strips 149,150 which are aligned with underlying strips 151,152 of the non-adhesive coating material 144.

The three form parts 145,146,147 are separable from each other by means of transverse tear lines 153,154 or lines of perforations. Alternatively, a suitable cutting device may be used to separate the form parts after printing, and in this case the lines of perforations may be omitted. Each form part includes a return postcard portion 155 which is attachable to an item to be mailed via the adhesively backed side strips 149,150, which can be peeled away from the underlying strips of the rear sheet because of the underlying release coating strips 151,152. Each form part also includes a side portion 156 which carries the identifying number label 148 and which is secured to the return postcard portions via a vertical line of perforations 157. Vertical lines of perforations 158,159 on each side of the return postcard portions 155 may be used to separate the return postcard from the mailed item on delivery to the addressee.

The upper sheet will be die cut along the lines 160 surrounding each of the identifying number labels 148. The

lower sheet is die cut along lines 161,162 underlying the side strips 149,150 so that the lower sheet can be peeled away along these strips to leave the adhesive coating exposed for attaching the return postcard to an item to be mailed, in the same way as described above in the first embodiment.

Preferably, the portions of each form part apart from label carrying portion 156 correspond to a Post Office green return receipt form PS 3811. The front sheet of section 155 will include the appropriate printed indicia and areas for receiving the appropriate information, as in the previous embodiments, and like reference numerals have been used for like parts of the form. The rear face of the form section 155 will be identical to that of the form part 84 of the first embodiment.

The upper and lower sheets of the form in all of the regions of the form which are outside the areas of the lower sheet coated with release material 144 will be permanently secured together into an integral structure. The overall thickness of the form will be such that it can be used in a laser printer, so that the user can enter a series of names and addresses at a computer terminal, or download names and addresses from memory, in order to print them onto successive form parts 145,146 and 147 and successive form sheets. This will considerably speed up the procedure for certified mailing of a large number of items or envelopes. Once printed, the form can be separated into three separate form parts. The certified mail number label 148 on each form part is peeled off and suitably applied to successive items to be mailed, while the side parts 156 are detached along tear line 157 and discarded. The strips of the rear sheet outside die cut lines 161 and 162 are peeled away, and each return postcard 155 is secured via the exposed marginal portions of adhesive backing side strips 149,150 to the appropriate item to be mailed. On receipt by the addressee, the return form part 155 is detached from the item via tear lines 158 and 159, and mailed back to the sender to confirm receipt.

This form provides a convenient and inexpensive way to prepare certified mail items using a laser printer. It will considerably reduce the amount of time needed to prepare such items for mailing.

FIGS. 11 and 12 illustrate a two layer form 170 according to another embodiment of the invention, which includes the same basic form parts as in the second embodiment but with a different layout. In this embodiment, rather than the form parts and labels being laid out transversely across the form sheet and separated by transverse tear lines as in the first embodiment, the various form parts are laid out lengthwise along the sheet and separated by a longitudinal tear line and transverse tear lines.

As in the previous embodiments, the form 170 comprises an upper sheet 171 and a lower sheet 172. The upper sheet has a coating 173 of adhesive material for securing the upper sheet to the lower sheet in all areas except for predetermined regions of the lower sheet which are coated with a non-adhesive or release material 174 such as silicone gel, whereby the front sheet is not permanently adhered to the rear sheet in these specific regions.

The form 170 may be separated lengthwise along a first, longitudinal line of perforations 175 into portions 176,177. Portion 176 includes a return postcard section 178 and a label carrying portion 179 separable from the section 178 via a transverse line of perforations 181. The remainder of portion 176 includes a return postcard 183 with side strips 185,186 separable from the return postcard along perforation lines 187,188 extending transverse to line 175. Another line of perforations 189 is provided on the opposite side of

strip 185 parallel to line 187, to remove an unused end portion of the form portion 176.

Form portion 177 includes a receipt portion 190 identical to receipt portion 60 of the first embodiment but oriented perpendicular to portion 60, and like reference numerals have been used for like parts of the receipt portions. Portion 177 also includes label carrying portions 191,192,193. Receipt portion 190 is separable from the remainder of the form portion 177 via perforation line 194 extending transverse to line 175. The label carrying portion 191 is separable along parallel perforation line 195 from the portions 192 and 193, which can then be separated along perforation line 196 extending transversely between lines 194 and 195.

Label carrying portion 191 carries three identical address labels 197 which are separable from the remainder of the sheet 171 via die cut lines 198, and which are aligned with regions of the lower sheet coated with release coating 174 so that the labels may be peeled off. The adhesive layer 173 coating the rear faces of labels 197 may then be used to adhere the labels to an item to be mailed, a records sheet, a billing sheet, or the like. Label carrying portion 192 carries another separable address label 199 aligned with a region of release coating 174 on the lower sheet and separable from the front sheet along die cut line 200. This can be used for keeping records of items mailed, in an equivalent manner to label 36 of the first embodiment described above. Label carrying portion 193 carries a removable label 201 which carries the Post Office identifying number for the mailing service used, such as Certified Mail. Label 201 is equivalent to label 119 of the second embodiment described above, and is also aligned with a region of release coating 174 on the lower sheet, and separable from the upper sheet along die cut line 202.

Return postcard 183 is identical to the return postcards 60 of the first embodiment, 124 of the second embodiment, and 155 of the third embodiment, and like reference numerals have been used for like parts as appropriate. The side strips 185 and 186 on each side of postcard 183 are aligned with corresponding strips of release coating 174 on the underlying lower sheet 172, as in the previous embodiments, and appropriate die cut lines in the lower sheet in the region of the side strips allow the lower sheet portions underlying the side strips to be peeled away, as in the previous embodiments, so that the side strips may be adhered to an envelope or package. The return postcard and side strips will first be separated from the remainder of the form along tear lines 175,181 and 189. As in the second embodiment, one of the side strips may carry a detachable label 134 for use by a mail carrier in the event that an item of certified mail cannot be delivered, as described above in connection with the embodiment of FIGS. 6 and 7. The lower sheet 172 will have a region coated with release coating 174 underlying label 134, and label 134 hit a die cut periphery to permit it to be peeled away from the side strip if needed.

Portion 179 of the form carries a removable certified mail label 204 which carries the Post Office number for identifying the item of mail. This is equivalent to the label 38 of the first embodiment, the label 118 of the second embodiment, and labels 148 of the third embodiment. Three narrow labels 205,206,207 carrying informational indicia such as "Return Receipt Requested", "Addressee's Address" and "Restricted Delivery", for informing the post office carrier of the conditions under which the item is to be delivered, are located adjacent label 204. The label 204 may also be imprinted with a patch of suitable identifying compound or ink, such as taggant ink, which can be used in automatic mail sorting machines to pick out certified mail

items. The labels 204,205,206,207 are aligned with regions of the lower sheet coated with release coating 174, and have die cut peripheral edges 208 so that they may be peeled off and adhered to an item to be mailed.

As in the previous embodiments, the blank areas of form 170 will be imprinted by a laser printer with the addressee's name and address and any other appropriate information, and the form will then be separated into its various parts for use in preparing an item for certified mail and keeping records of the mailing. The various lines of perforations used to separate the form parts may be eliminated in alternative embodiments, and the form may instead be cut into its various parts after printing, using a suitable cutting device. The only lines of perforations which are required in this case are the lines 184 and 185 used to detach the return postcard 181 when the item of mail is delivered.

Although the procedure described above involves use of separate, single forms in a stack as used by certain printers such as laser printers, it will be understood that the same, two-sheet form may be used in a continuous format for the type of printer which has a continuous paper feed. In this case, successive form lengths will be releasably secured together via transverse lines of perforations, and the form will have detachable margins containing pin feed perforations for engagement with the printer feed, as in my U.S. Pat. No. 5,190,210 referred to above.

The mailing form described above will considerably reduce the time needed to prepare items for certain specialized mailing procedures such as certified mail. All the labels needed both for addressing the item, addressing a confirmation copy, and providing a billing or mailing record copy, are provided on the same form in an easily detachable fashion. The return postcard is of two layer paper stock, avoiding the need to use relatively thick card stock which cannot be conveniently integrated with paper forms, or fed through a laser printer or other printers which will not take such stock. With this invention, the same form also contains other documents needed for special mailing procedures, including the receipt, the mail identifying number label, and labels concerned with other, optional services. The computer is programmed to print the addressee address on the mailing labels, billing or record labels, and the return postcard in the same printing stage, in a quick and convenient manner. Thus, these labels do not have to be prepared separately on a manual typewriter or the like as was necessary in the past. Mail preparation is thereby made faster and more efficient than was previously possible. Manual entry of mailing records in a record book is also not necessary with this form, which provides labels which can be simply peeled away from the form and adhered in the appropriate place in the mail record book.

Although some preferred embodiments of the invention have been described above by way of example only, it will be understood by those skilled in the field that modifications may be made to the disclosed embodiments without departing from the scope of the invention, which is defined by the appended claims.

I claim:

1. A mailing form, comprising:

first and second superimposed sheets, each sheet having an inner face facing the other sheet and an outer face; the first sheet having a plurality of detachable areas which are detachable from the remainder of the first sheet, each detachable area having an adhesive backing facing said second sheet;

the first and second sheets being permanently secured together over predetermined, adhered areas of said form;

the second sheet having predetermined, non-adhered areas on its inner face which are aligned with the detachable areas of the first sheet, the non-adhered areas being covered with a non-adhesive coating on the inner face facing said first sheet;

at least one portion of said form including one of said adhered areas being detachable from the remainder of the form to provide a predetermined mailing form part, each of the sheets having predetermined printed indicia on its outer face in said one adhered portion;

the inner face of the first sheet being coated with a layer of adhesive material for securing the first sheet to the second sheet, the adhesive layer in said detachable areas comprising said adhesive backing; and

the form having at least one tear line for detaching said one portion of the form from the remainder of the form, said portion including a pair of second tear lines extending perpendicular to said one tear line for detaching a part of said mailing form part from the remainder of said portion, and side strips on opposite sides of said portion outside said tear lines, the inner face of said second sheet being coated with non-adhesive material in said side strips.

2. The form as claimed in claim 1, wherein said one adhered area comprises a return postcard having printed indicia on both of its faces, including marked areas for receiving predetermined information concerning a mailed item, one of said areas on the outer face of said first sheet comprising an addressee area for receiving the address to which the item is to be mailed.

3. The form as claimed in claim 1, wherein each sheet is of paper stock.

4. The form as claimed in claim 3, wherein the combined thickness of said sheets is no less than 0.007 inches.

5. The form as claimed in claim 4, wherein the sheets are of equal thickness.

6. The form as claimed in claim 4, wherein the first sheet is thinner than the second sheet.

7. The form as claimed in claim 4, wherein the first sheet is thicker than the second sheet.

8. The form as claimed in claim 1, including a plurality of tear lines extending through both sheets of the form and a plurality of die cut lines extending through only the first sheet of the form.

9. The form as claimed in claim 1, wherein the first sheet has a plurality of die cut lines defining said detachable areas.

10. The form as claimed in claim 1, wherein each side strip of said second sheet has a third tear line extending parallel to said first tear line for detaching part of each side strip from said portion to expose said adhesive material for adhering the portion to an item to be mailed.

11. The form as claimed in claim 1, wherein said detachable areas include at least two identical address labels for receiving an address to which an item is to be mailed.

12. The form as claimed in claim 11, wherein said detachable areas include three identical address labels.

13. The form as claimed in claim 1, wherein said detachable areas include at least one identifying number label for identifying and tracking a mailed item.

14. A mailing form, comprising:

first and second superimposed sheets, each sheet having an inner face facing the other sheet and an outer face; a layer of adhesive material between the inner faces of said sheets;

the inner face of the second sheet being coated with a non-adhesive material in predetermined coated areas of

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said inner face whereby the first sheet is adhered to the second sheet only in adhered areas outside said coated areas;

the sheets having tear lines extending through both sheets whereby sections of the form can be separated from one another;

the first sheet having tear lines extending through only the first sheet around predetermined non-adhered areas of the first sheet whereby said non-adhered areas can be detached from the remainder of the form, said non-adhered areas including labels for attaching to an item to be mailed;

at least one of said separable form sections including an adhered area and comprising a predetermined mailing form part, each of said sheets having printed indicia on its outer face at least in said one form section;

the form having a first tear line for detaching a portion of the form from the remainder of the form, said portion including said predetermined mailing form part and an additional part, said portion including at least three tear lines extending transverse to said first tear line, including a second tear line for detaching said additional part from said mailing form part, and a pair of tear lines for defining a central portion between said tear lines and side strips on opposite sides of said central portion outside said tear lines, the inner face of said second sheet being coated with non-adhesive material in said side strips.

15. The form as claimed in claim 14, wherein one of said non-adhered label areas is located in one of said side strips.

16. The form as claimed in claim 15, wherein said one label area carries identifying insignia for identifying an item to be mailed.

17. The form as claimed in claim 16, wherein a second non-adhered label area carries the same identifying insignia as said one label area.

18. The form as claimed in claim 14, wherein said form has three identical form sections separable along two, parallel spaced tear lines, each of said form sections including one of said predetermined mailing form parts, the central portion of each mailing form part comprising a return postcard having printed indicia on both of its faces, including marked areas for receiving predetermined information concerning a mailed item, one of said areas on the outer face of said first sheet comprising an addressee area for receiving the address to which an item is to be mailed.

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19. The form as claimed in claim 18, wherein each of said form sections includes said additional part, and said additional part includes a non-adhered area comprising a label carrying identifying insignia for identifying an item of mail.

20. The form as claimed in claim 19, wherein said labels on said three form sections carry consecutive identifying numbers.

21. The form as claimed in claim 14, wherein said sheets are rectangular and said first tear line extends longitudinally along said form.

22. A mailing form, comprising:

first and second superimposed sheets, each sheet having an inner face facing the other sheet and an outer face, the sheets being rectangular and having opposite side edges and opposite upper and lower edges;

a layer of adhesive material coating the entire inner face of the first sheet;

the first sheet having a plurality of detachable, nonadhered areas which are detachable from the remainder of the first sheet;

the first and second sheets being permanently secured together over predetermined, adhered areas of the form;

the second sheet having predetermined, non-adhered areas on its inner face which are aligned with said detachable areas of the first sheet, the non-adhered areas being covered with a non-adhesive coating, whereby the first sheet is permanently adhered to the second sheet only in areas outside said non-adhered areas;

the first sheet having printed indicia on its outer face defining at least two separate form parts and a separation region between said form parts extending across the entire sheet between opposite edges of said sheet;

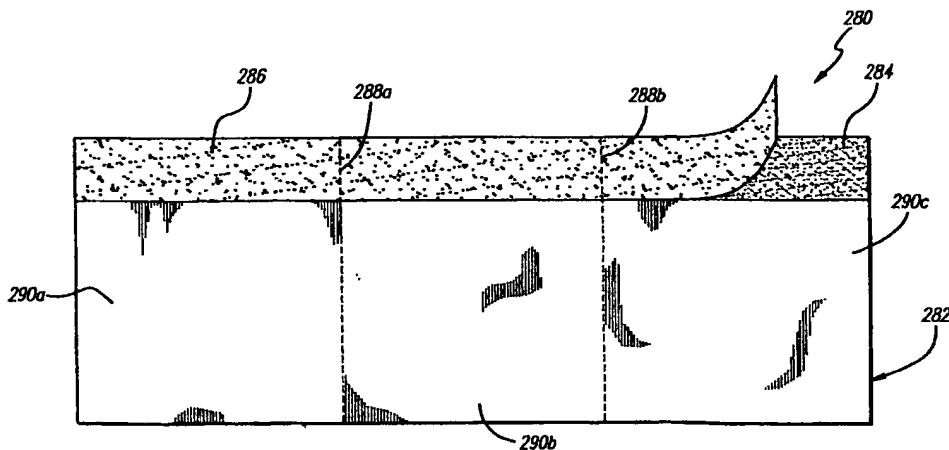
one of said form parts including a mailing form portion for attachment to an item to be mailed, the mailing form portion including a central, return postcard and side strips on opposite sides of the central postcard, and having a pair of tear lines extending transverse to said separation region for separating each side strip from said return postcard; and

the inner face of said second sheet being coated with non-adhesive material in said side strips.

* * * * *

[19]

[45] **Date of Patent:** Dec. 14, 1999



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FIG. 1

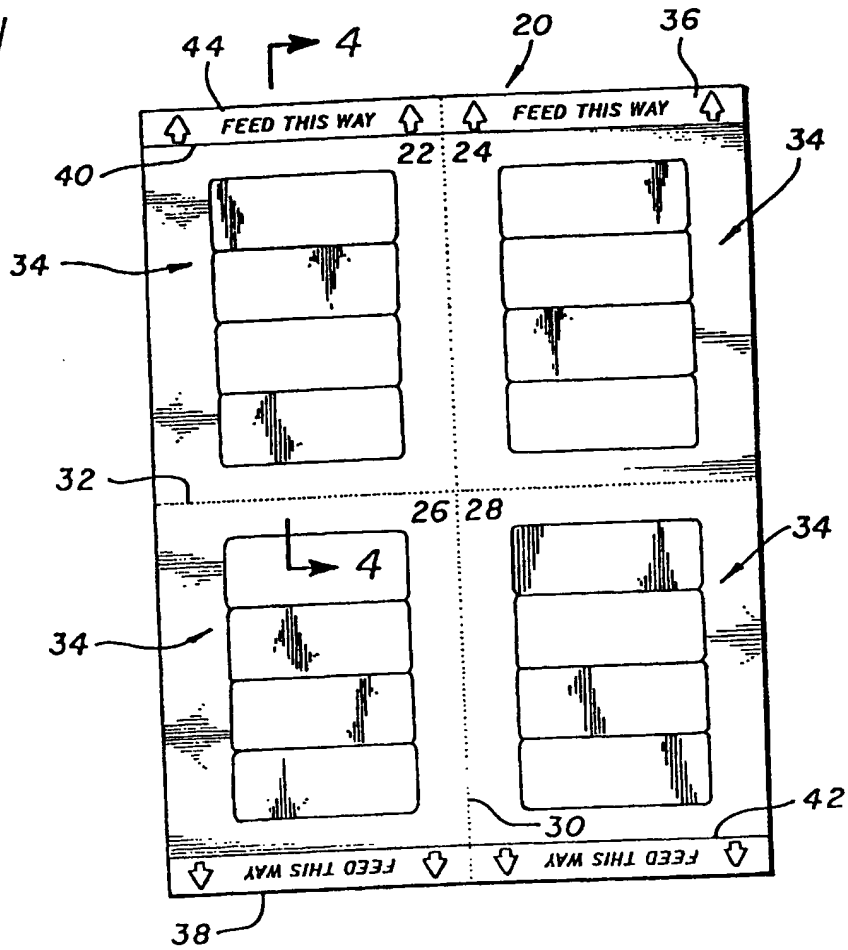


FIG. 2
PRIOR ART

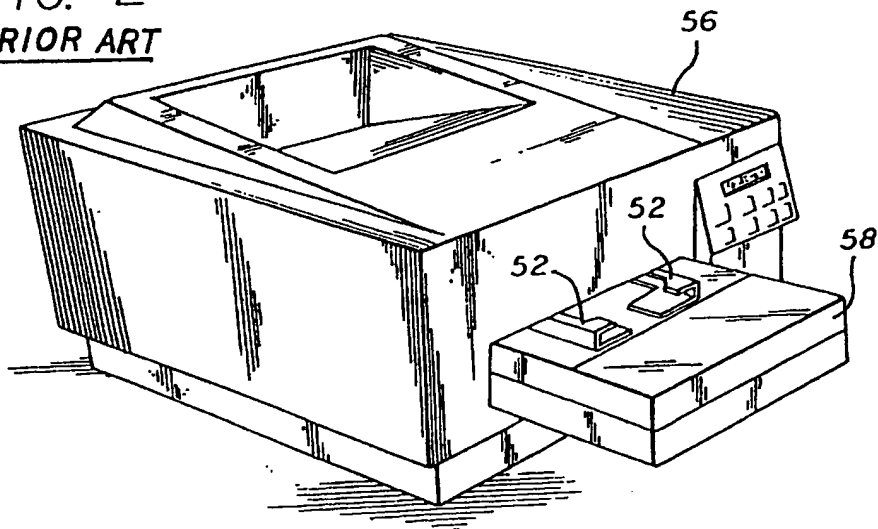


FIG. 5

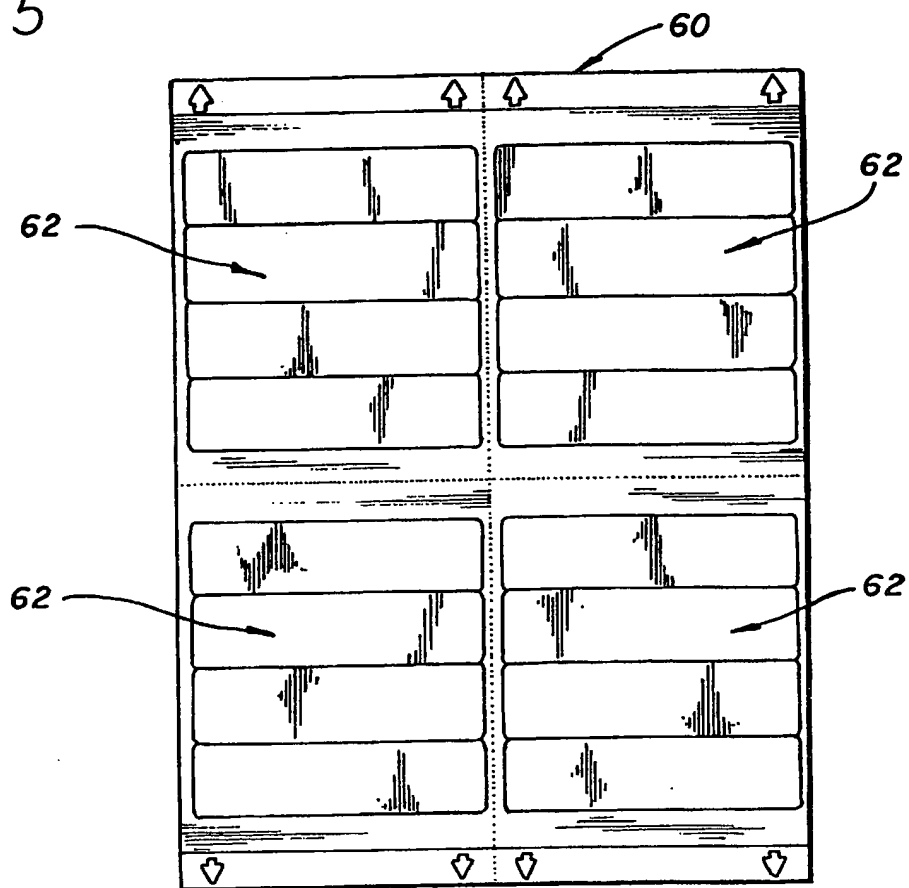


FIG. 3

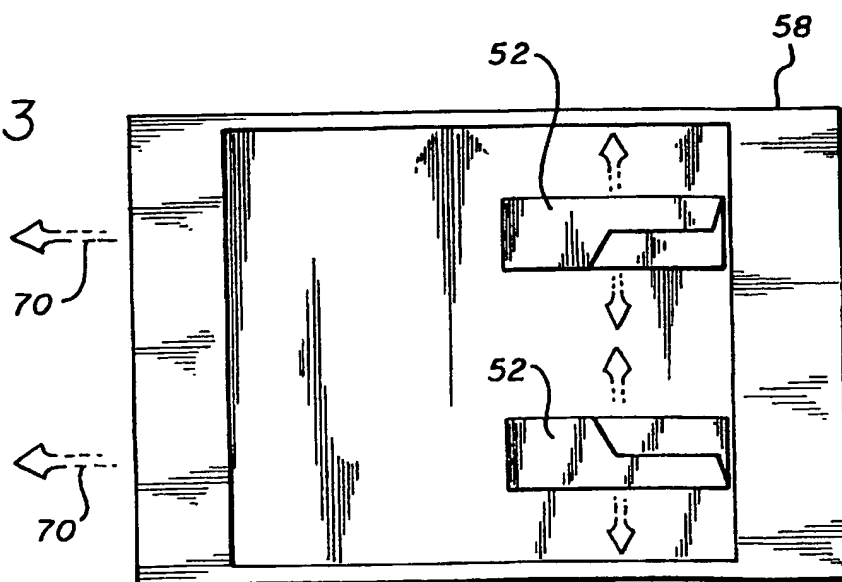


FIG. 6

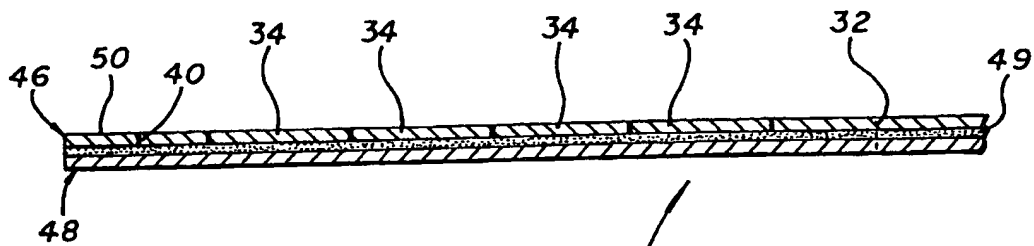
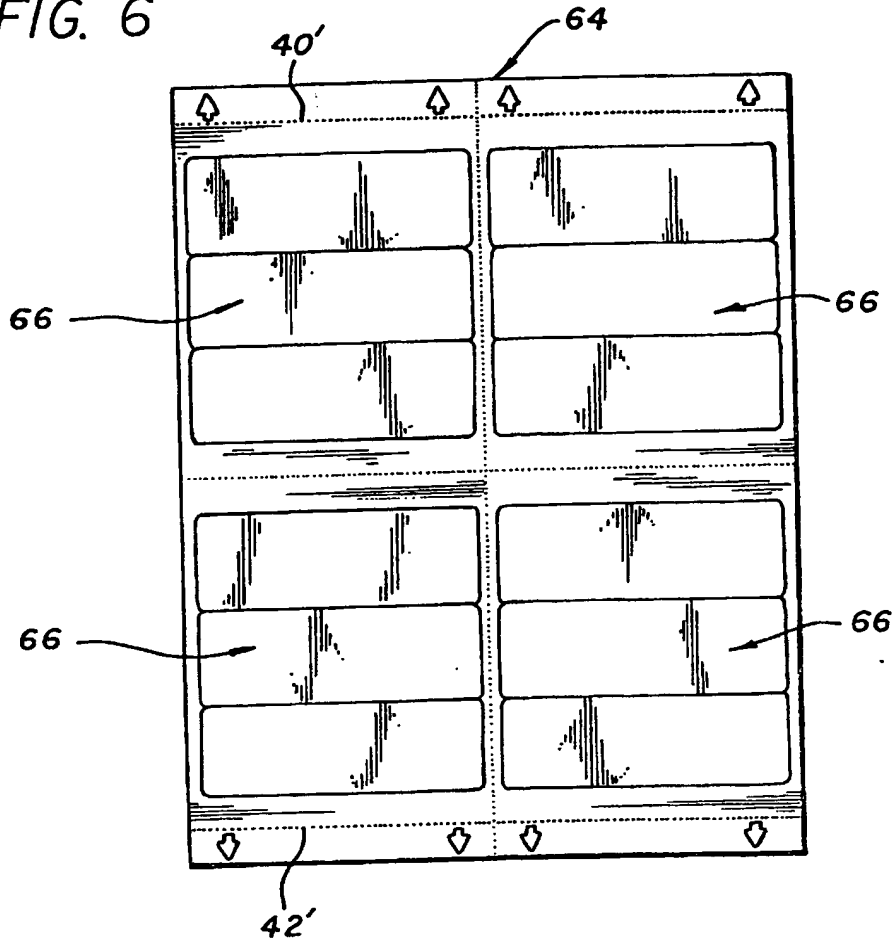


FIG. 4

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FIG. 7

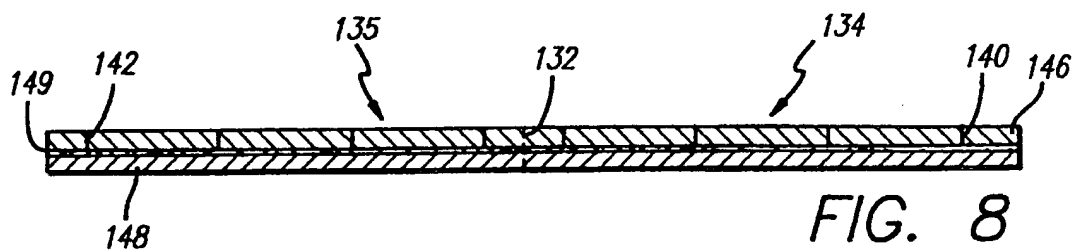
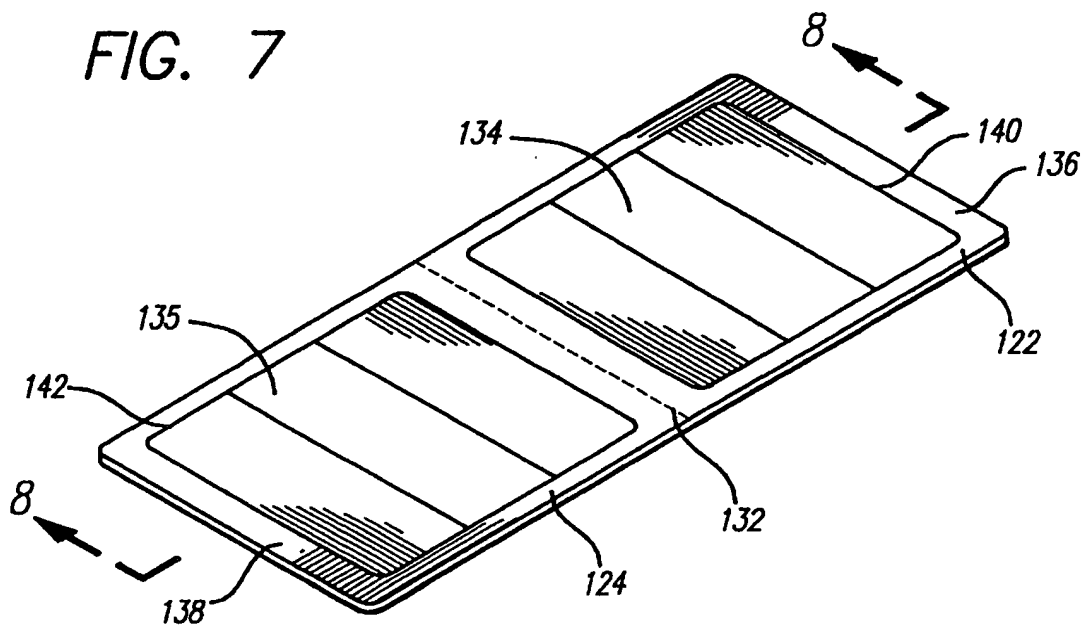
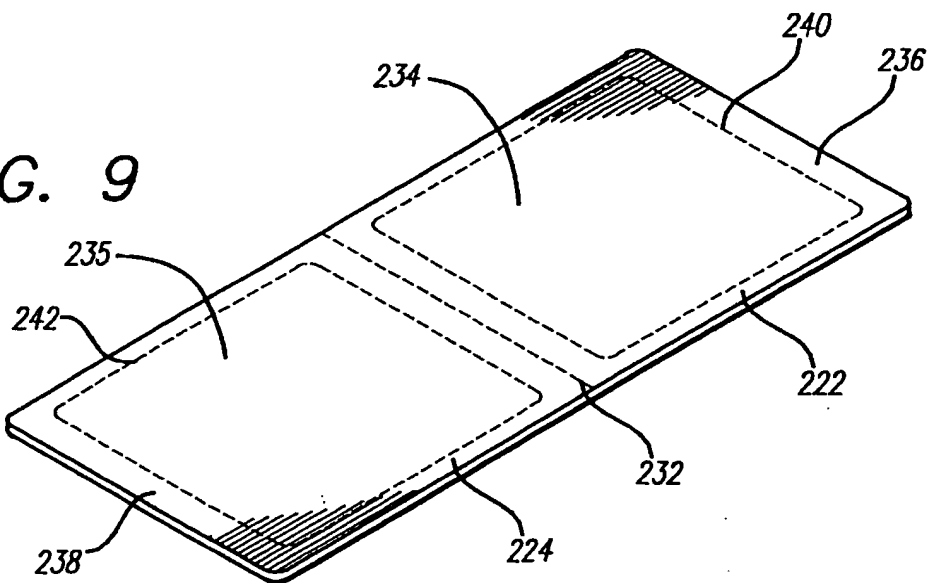
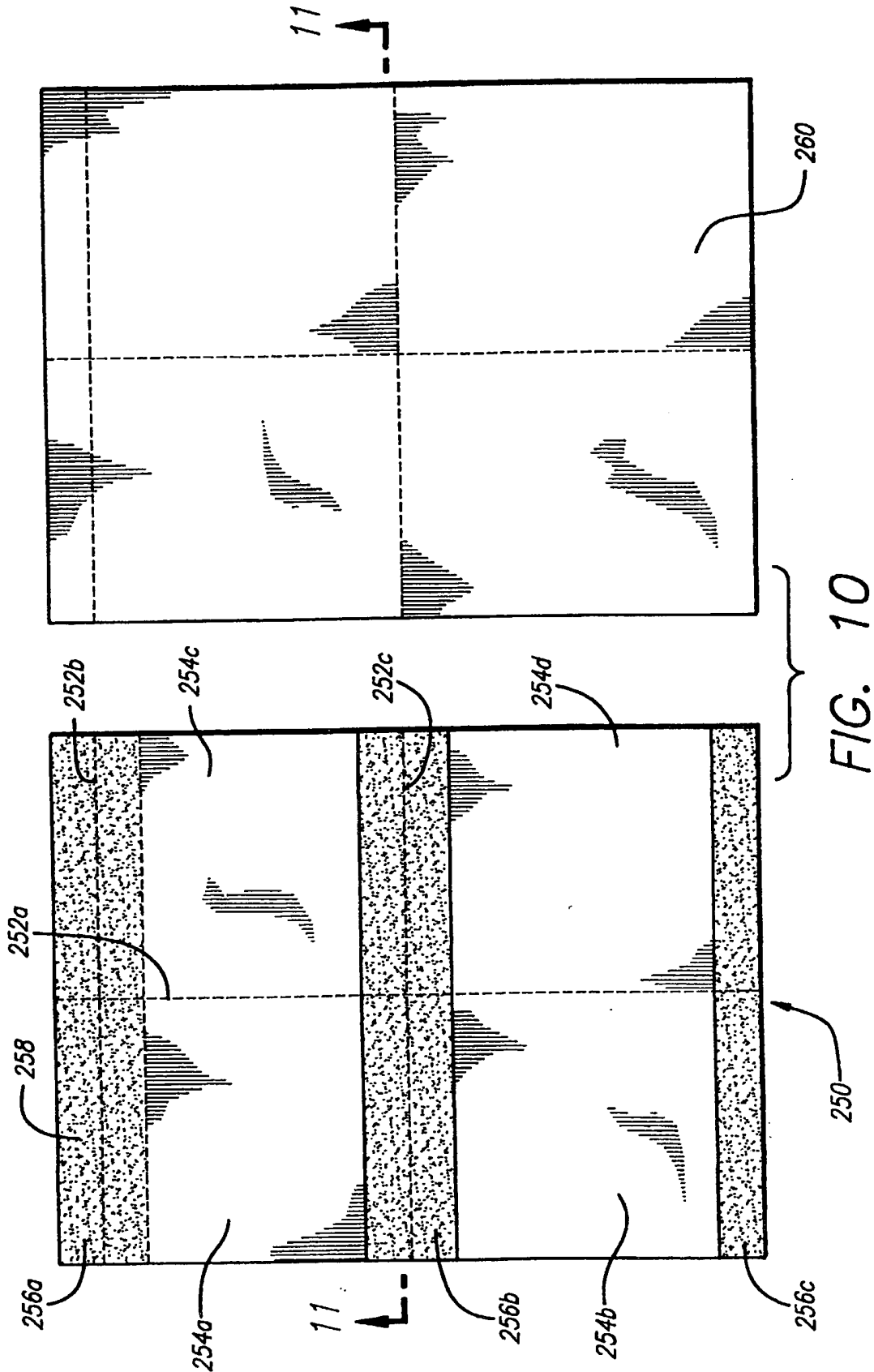
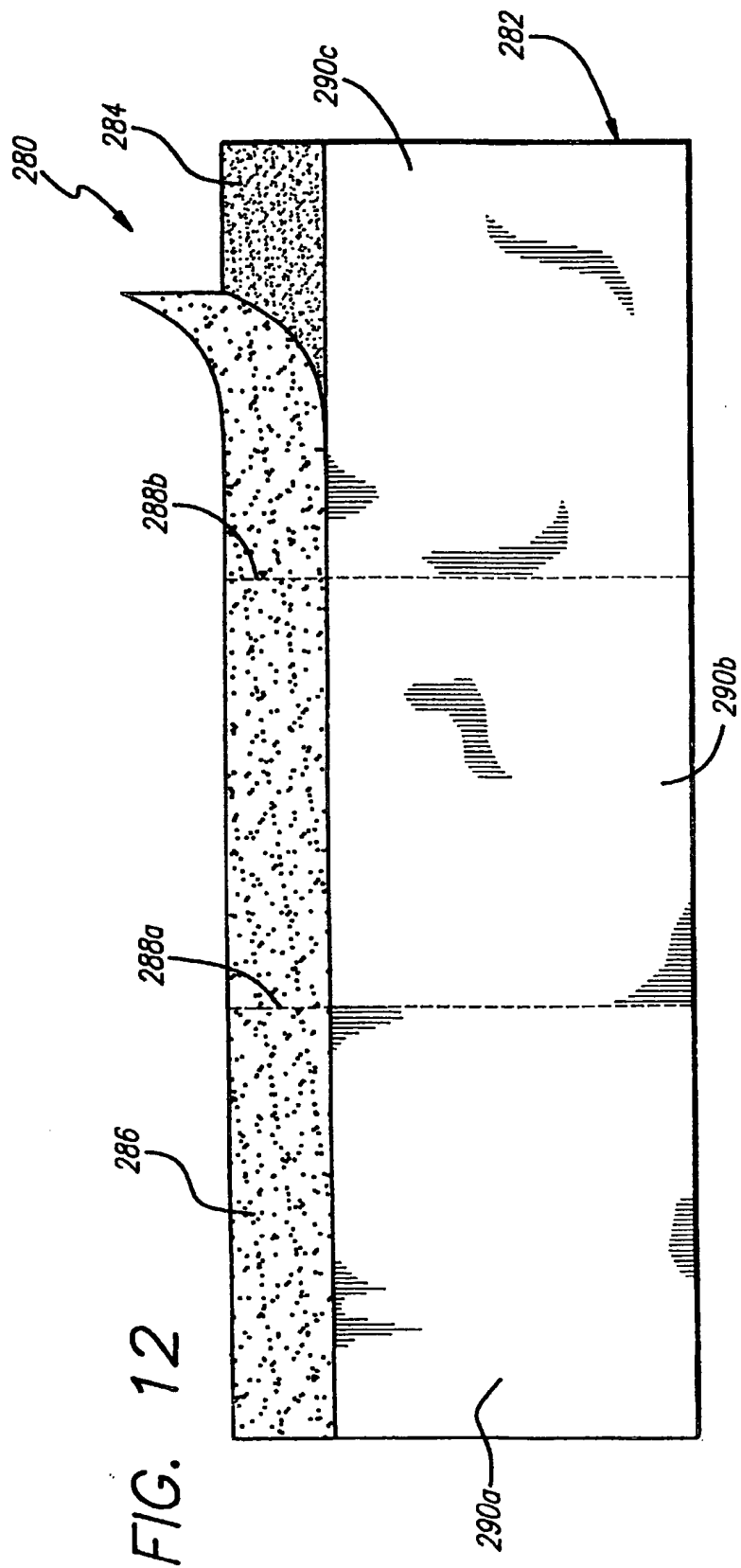
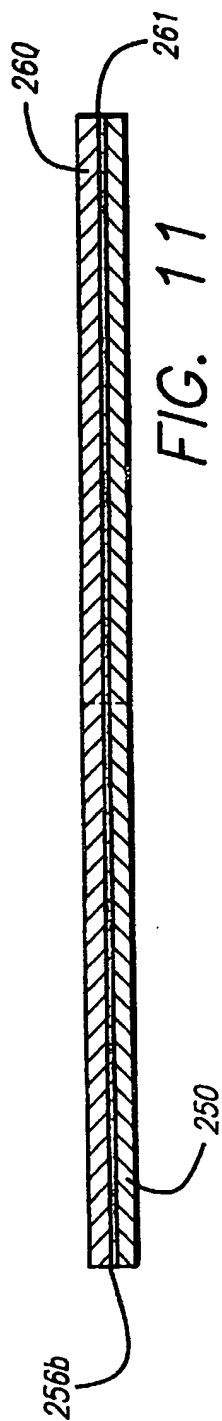


FIG. 8

FIG. 9







DIVISIBLE LASER NOTE SHEET

CROSS-REFERENCE TO RELATED APPLICATION

This application is a continuation-in-part of U.S. patent application Ser. No. 08/343,023, filed Nov. 21, 1994, which in turn is a continuation-in-part of U.S. patent application Ser. No. 08/063,213, filed May 17, 1993 and now issued as U.S. Pat. No. 5,389,414, entitled DIVISIBLE LASER LABEL SHEET.

FIELD OF THE INVENTION

The present invention relates generally to a multiple purpose, sheet assembly that may be divided into subsections and to a method for printing the subsections in laser printers, ink jet printers and photocopiers.

BACKGROUND OF THE INVENTION

Laser printers and ink jet printers have spawned a wide variety of options for personal printing that have not existed previously. A personal computer user can now prepare text on a word processing program and print the text directly onto sheets that pass through the laser or ink jet printer. Such sheets may consist of paper, labels applied to a backing sheet, card stock and a variety of other materials. The sheets may have a variety of different dimensions and can usually be fed into the laser or ink jet printer through a standard paper tray.

One way in which secretaries, in particular, have used laser and ink jet printers has been to print reminder notes and telephone messages on full-sized sheets of paper. A secretary will often post such a note on a surface for someone else to see, such as on a file or on a computer screen. To hold the note in place, the secretary will often use a clip or tape.

This approach has at least two drawbacks that become apparent in every day use. First, the secretary frequently does not really need to print on a full sheet of paper, particularly for brief messages. A smaller sheet of paper would be usually provide sufficient space for a message, and paper is wasted when a full sheet is used.

Secondly, the secretary must have tape or a clip nearby in order to attach the sheet to the desired surface. If the secretary is out of tape or clips and the sheet is not attached to a surface or file, the sheet may get lost and the message never delivered.

With the introduction of adjustable manual feed guides such as those found on the Hewlett Packard LaserJet II, III and IV laser printers and other printers, users may now print on sheets smaller than the typical 8½×11 inch full sheet size. For example, many laser printers may print sheets that are as small as 4 inches long and 3 inches wide. However, to print message notes smaller than a full sheet, the user typically must cut full-sized sheets down to size. Even then, the user must have tape or clips nearby in order to post the message notes.

SUMMARY OF THE INVENTION

Broadly considered, a versatile method for preparing and printing adhesively-backed message notes includes a number of steps. The method includes preparing a divisible note assembly for printing in a laser, ink-jet, photocopier or similar printer. The assembly has a divisible backing sheet and an adhesively-backed divisible note paper sheet that mounts onto the backing sheet. The assembly is divided into at least two subsections by microperforations that extend

through both the note paper sheet and the backing sheet. The user prints a message onto a note paper on a subsection of the label sheet assembly using a laser printer, ink jet printer or photocopier. The user separates at least one of said subsections from the assembly (either before or after the printing step) along a line of microperforations. The user removes the backing sheet from the subsection, and applies the note to a substrate.

The present invention is helpful in overcoming the shortcomings of the prior art in a number of ways. The versatile note preparation method provides a sub-dividable assembly that gives the user the choice of printing a full sheet, or of printing a smaller section of a full sheet when printing on a smaller area is desired. The method is environmentally efficient in that a small note may be printed without having to dispose of extra, unused paper area. Certain embodiments of the present invention may include a temperature stable adhesive which can withstand the high-heat environment of a laser printer. The method may be applied to a variety of assemblies having different sheet sizes, including smaller sheets which can be efficiently stored in a desk drawer or on a small shelf. Additionally, the present method for preparing small notes is convenient for anyone having access to a personal computer and a laser printer, ink jet printer, photocopier, or other advanced printer.

In one preferred embodiment of the method, each of the subsections is between approximately 3 and 5 inches wide by between approximately 4 and 6 inches long, in order to meet the minimum width and length requirements of laser and ink jet printers. In this embodiment, a message note assembly having two sections would be between approximately 3 and 5 inches wide by between approximately 8 and 10 inches long.

The method may further include the step of cutting or perforating one or more flexibility line into a leading edge portion of the assembly. The flexibility lines increase the flexibility of the assembly and reduce the possibility that the assembly will jam in the complex printer path of a laser printer, ink jet printer, photocopier, or other printer. The step of cutting or perforating flexibility lines may include cutting or perforating the flexibility line approximately ½-inch from the leading edge of the assembly to provide sufficient flexibility to prevent jamming. considering one embodiment of the present invention in more detail, a method for handling small size sheets may include forming a sheet assembly approximately at least 3 inches by at least approximately 8 inches. The sheet assembly has an upper sheet with pressure-sensitive adhesive on at least a portion of the rear side thereof, and also having a second sheet at least covering the pressure-sensitive adhesive. The line of perforations is formed across the sheet assembly to divide the sheets into at least two subsheets, each at least approximately 3 inches wide by at least approximately 4 inches long, with the perforations extending through both the upper and second sheet. The sheet assembly is separated along the line of perforations into two subsheets. Information is printed on the upper sheet by feeding at least one of the subsheets through a printer. The second sheet that covers the pressure-adhesive on one of the subsheets is removed. The pressure-sensitive adhesive and the upper sheet are applied to a substrate.

This method may be supplemented in a variety of ways. The perforations may be microperforations, having at least 35 cuts and ties per inch. The assembly may be made to be substantially flat and substantially free of apertures, such as tractor feed holes found on sheets printed on dot matrix printers. The method may include the step of dividing the

assembly into two identical halves by the line of perforations, with the line of perforations being a line of symmetry. The step of printing information on the upper sheet by feeding at least one of the subsheets through a printer may further include adjusting printer feed guides to a width approximately equal to that of one of the subsheets. The upper sheet may be formed of substantially transparent paper or transparent film so that the color and/or texture of a substrate may be viewed through the upper sheet. Adhesive which is stable up to at least 200° C. for at least 0.1 seconds may be used to prevent the adhesive from oozing out of the label assembly in the high-heat environment of a laser or xerographic printer.

Embodiments of the present invention may be formed with limitations on the thickness, such as 12 mils or 15 mils. Such thickness limitations are intended to insure that the present label assemblies are sufficiently thin to pass through current laser printers, ink jet printers, and photocopiers.

Other objects, features, and advantages of the invention will become apparent from a consideration of the following detailed description and the accompanying figures.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a top perspective view showing a full-sized label sheet having four separable sections each having four labels;

FIG. 2 is a perspective view of a conventional laser printer having adjustable sheet guides for printing sheets having dimensions less than standard sheet size;

FIG. 3 is a top perspective view of a laser printer paper tray having adjustable manual feed guides which a user can adjust to accommodate a section of labels having dimensions less than 8½×11 inches;

FIG. 4 is a sectional view taken along section 4—4 of FIG. 1 showing the die cut labels adhering to an underlying backing sheet;

FIG. 5 is a top perspective view showing a full-sized sheet having four separable sections each having four wide labels;

FIG. 6 is a top perspective view showing a full-sized sheet having separable sections each having three labels;

FIG. 7 is a top perspective view of a smaller embodiment of a divisible label sheet assembly;

FIG. 8 is a sectional view taken about Line 8—8 of FIG. 7;

FIG. 9 is a top perspective view of a divisible sheet having closed patterns of perforations defining removable cards;

FIG. 10 is an exploded view of adhesively-backed, divisible sheet of laser-printable notes with a full backing sheet;

FIG. 11 is a cross-sectional view taken along Section 11—11 in FIG. 10; and

FIG. 12 is a perspective view of another embodiment of a divisible sheet of laser-printable notes having a backing strip to cover an adhesive stripe during printing and prior to use.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

The disclosures of the grandparent patent, U.S. Pat. No. 5,389,414, and of the parent patent application, U.S. patent application Ser. No. 08/343,023, are hereby incorporated by reference.

Referring more particularly to the drawings, FIG. 1 illustrates an embodiment of a double thickness label sheet assembly. The label sheet 20 is divided into four subsections 22, 24, 26, and 28, which are separated by perpendicular

lines of microperforations 30 and 32. Each subsection includes a set of labels 34 that is generally centered within the subsection. Leading edge portions 36 and 38 comprise die cut flexibility lines 40 and 42, and indicia 44 to indicate the proper direction for feeding a label subsection into a laser printer, such as that illustrated in FIG. 2. "Leading edge" refers to that edge which is fed into the printer first.

FIG. 4 is a cross-sectional view of subsection 22 taken along section 4—4 of FIG. 1. FIG. 4 shows that the label assembly 20 includes a label layer 46 which is mounted on a backing layer 48. The label sheet has a pressure sensitive adhesive coating 49 which allows the label sheet to mount onto the backing layer 48, which has a silicone release coating to permit a user to remove labels from the backing layer. The release coating may alternatively be fluorinated or amine-based rather than silicone, or may be any other suitable coating.

The Hewlett Packard LaserJet 4 and 4M Printers User's Manual, Second Edition, March 1993, specifies that materials inserted into the printer must be stable in the presence of temperatures up to about 200° C. for at least 0.1 second to withstand the significant heat encountered in the printers' fusing process. Consequently, the adhesive of embodiments of the present invention may be selected to be temperature stable to a temperature of 200° C. for at least 0.1 second for this popular model of laser printer and those like it. Such an adhesive may be the P-09 acrylic adhesive sold by Avery Dennison Corporation, or a rubber based adhesive of styrene butadiene and ABA block copolymers compounded with tackifying resins. However, it is important to note that any suitable stable, pressure sensitive adhesive may be used which facilitates printing at high temperatures and peeling the labels from the backing layer 48.

FIG. 4 also shows that flexibility line 40 is die cut through label layer 46, but not through backing sheet 48. The purpose of the flexibility line is to allow the leading edge 50 to easily bend around the various twists and turns in a conventional laser printer feed path. Consequently, flexibility line 40 has the effect of avoiding paper jamming which may occur with sheets having more rigid leading edges.

Label set 34 is die cut out of the label layer 46. As seen in FIG. 4, the die cuts pass through the label layer but not the backing layer. Thus, the backing layer is left intact when the labels are removed.

FIG. 4 also shows perforation line 32, which separates subsection 22 from subsection 26. The perforation line 32 passes through both label layer 46 and backing layer 48, so that subsection 22 can be completely separated from subsection 26. The perforations are preferably closely spaced "microperforations" which leave a relatively smooth edge when the subsections are separated. "Microperforations" generally have at least thirty five cuts per inch, although many more cuts per inch may be used. It should be understood, however, that the term "microperforations" is intended to encompass all constructions in which the edges of the backing sheet are smooth and substantially free of coarse irregularities following separation.

FIG. 2 illustrates a typical laser printer 56 having a paper tray 58. Full sized sheets of paper or labels may be stored inside the paper tray for automatic feeding into the laser printer. Alternatively, paper or label sheets may be fed into the printer manually at adjustable manual feed guides 52, which are shown more clearly in FIG. 3. A user may adjust these guides to input sheets of various widths into the laser printer for printing. Consequently, a user can adjust the feed guides in order to input a subsection of label sheet 20 for

printing. Arrows 70 indicate the direction in which labels feed into laser printer 56.

An illustrative method of preparing small sets of labels from label sheet 20 is as follows. The user divides label sheet 20 into quarters along perforation lines 30 and 32, such that subsections 22-28 are separated from each other. The user then adjusts manual feed guides 52 on laser printer paper feed tray 54 to accommodate the non-conventional width of an individual subsection of label sheet 20. The user inserts a subsection of the label sheet into the manual feed guide, then sends a print command to the laser printer 56 to initiate printing.

FIGS. 5 and 6 illustrate alternative embodiments of the present invention. FIG. 5 illustrates a label sheet 60 having label sets 62. Each of these label sets 62 feature four labels that are considerably wider than the four labels of label set 34 of FIG. 1. Similarly, FIG. 6 illustrates a label sheet 64 having label sets 66 with three, rather than four, labels per subsection. In FIG. 6, increased flexibility is provided by the perforation lines 40' and 42' which serve substantially the same function as the die cut lines 40 and 42 of FIG. 1.

FIG. 7 illustrates a divisible label assembly having dimensions of between approximately 3 and 5 inches wide by approximately 10 or 11 inches long. For a two-sheet assembly, these ranges help ensure that each subsheet will individually satisfy the minimum dimension requirements of at least some popular laser and ink jet printers. However, it should be noted that minimum dimension requirements have been falling as printer technology has evolved. Consequently, the embodiment of FIG. 7 may have dimensions smaller 3 inches wide and 10 inches long.

More generally, the assembly of FIG. 7 may be at least approximately 3 inches wide by at least approximately 8 inches long to provide sufficient space on each subsection for one big label or several smaller diecut labels. A convenient assembly size for the embodiment of FIG. 7 is approximately 4 1/4 inches wide by 10 or 11 inches long, and is presently considered the preferred dimension of such an assembly.

Line of microperforations 132 is located on a line of symmetry of the label assembly. Line of perforations 132 extends through both the label layer 146 and the backing layer 148. Line of microperforations 132 separates the assembly into two subsheets 122, 124, which are mirror images of each other.

Subsheet 122 has a leading edge 136, while subsheet 124 has a leading edge 138. A die cut 140 extends across most of the width of subsection 122 to provide flexibility as subsection 122 feeds into the complex printer feed path of a laser or ink jet printer. Die cut line 140 is inset from the very edge of the leading edge area 136 by about 1/2-inch. Similarly, subsection 124 has a die cut flexibility line 142 which is inset approximately 1/2-inch from the very edge of leading edge 138.

As seen in FIG. 7, die cut lines 140, 142 serve the dual function of providing flexibility and defining one edge of a label. Subsection 122 includes label set 134, while subsection 124 includes label set 135. Both label sets are typically die cut, although they may alternatively be cut with laser cutters or water jets. FIG. 8 illustrates that the die cuts defining the labels extend through label layer 146, but do not extend through backing layer 148. It might be noted that any of the transverse die cut lines shown in FIG. 7 may be considered lines of flexibility.

The concept of providing a standard sized sheet that can be broken down into subsections for printing in a laser

printer can be extended beyond use with only labels. For instance, a standard sized sheet of card stock can be perforated to form several subsections, each having a set of separable business cards or 3 inch by 5 inch index cards rather than labels. With business cards normally having a size of 3 1/2 inches by 2 inches, a plurality of business cards could be mounted on each mini-sheet.

To print only one or just a few cards at a time, the standard sized sheet may be broken down into the subsections, which are then fed through the manual feed guides and into the laser printer. Such sheets may have increased flexibility at the feed edges thereof by providing a perforation line similar in location to lines 40 and 42 of FIG. 1, although not necessarily extending fully across the width of the subsections. With card stock greater than about 0.007 inch thick or about 7 mils, it is preferable to have a line of perforations, either partial or full, extending along the leading edge of the mini-sheet, about 1/2-inch from the edge, to provide the desired increased flexibility.

FIG. 9 illustrates a further embodiment of the present invention. A single layer sheet of card stock is divided by a line of microperforations 232 into two identical sections. Each section 236, 238 includes a closed pattern of perforations to define a removable card. FIG. 9 shows one removable card 235 associated with subsection 224, and a second card 234 associated with subsection 222. Each subsection includes a line of perforations inset from and running parallel to a leading edge. Thus, FIG. 9 illustrates a line of perforations 142 inset approximately 1/2-inch from the very edge of leading edge 238. Similarly, a line of microperforations 140 runs parallel to the very edge of leading edge 236. Both lines of perforation 240, 242 provide flexibility to the card stock at the leading edge to prevent the card stock from jamming within the printer. It has been determined that card stock having a thickness of greater than about 7 mils will tend to jam in the feed path of most laser printers. Consequently, lines of perforation such as 240, 242 are necessary to prevent such embodiments from jamming in the laser printer. However, it should be noted that card assemblies having a thickness of 7 mils or less do not generally need lines of flexibility such as 240, 242.

Although not illustrated in the present drawings, an embodiment such as FIG. 9 for printing cards may include an adhesively coated piece of transparent plastic lamination which is coextensive with and which adheres to the top surface of the card stock. The card stock may be coated on the top with a release coating in areas so that the lamination may be removed from those areas. However, at the top surface of the card, there would be no release coating. A user may print indicia on the lower surface of the card stock, then detach the card along the lines of perforation from the card stock. The user also removes the lamination from the release-coated areas of the upper surface of the assembly. The user then folds the lamination over about the removed card to laminate the card. The user may then trim any excess lamination with scissors, or the lamination may be sized such that no trimming is necessary.

As other alternatives, the cards of FIG. 9 may have various shapes, for example, the cards may be shaped to have ears which may be inserted into slots in hanging file folders. The user prints indicia on the card, punches the card out of the assembly along the lines of perforation, then inserts the ears of the card into the hanging file folder slots. As yet another alternative, a lamination/card set such as that described above may be shaped such that the lamination strip may be folded about the card with excess length of lamination extending beyond the length of the card on both

the front and back. This then defines a self-adhering index tab which may be applied to the page of notebook or other member. Numerous other uses may be implemented for this card embodiment. In general, it is anticipated that the sheet of card stock for these embodiments will be between 7 and 10 mils thick. However, thinner sheets may also be used, including sheets of paper.

The embodiment illustrated in FIG. 9 may be modified such that there are a plurality of individual smaller cards on one or both of the subsections. So, for instance, 20 or more rectangular index tab insert cards can be defined by a pattern of microperforations on one or both of the subsections.

It should be noted that a variety of labels and other products have been previously provided for use in dot matrix printers. Generally speaking, these products include tractor feed holes arranged in a spaced relationship along the sides of the assemblies. However, these tractor feed holes are not appropriate for use in laser printers, ink jet printers, and photocopiers. Consequently, many of the various embodiments of the present invention are substantially flat on both their upper and lower surfaces and have no open apertures, such as tractor feed holes.

One embodiment of the present invention is a divisible sheet of labels having a transparent paper or transparent film label sheet having an adhesive coating and being adhered to a backing sheet. The labels are die cut or otherwise cut from the transparent paper or transparent film sheet. The backing sheet is generally coated with a release coating to facilitate convenient removal of the labels. One suitable transparent paper is Gateway Natural Tracing Paper, manufactured by Chartham Paper Mill, Canterbury, Kent, England. In embodiments incorporating plastic films, a polyester film having a print-receptive surface may be used. Suitable plastic films are available from Protect-All, Inc. of Darien, Wisconsin. Coatings to enhance print receptivity are available from Precision Coatings, Inc. of Walled Lake, Mich.

The present invention also extends to sheets of adhesively backed note paper. FIG. 10 illustrates a sheet of note paper 250 that is subdivided by perforation lines 252a, 252b and 252c into separate notes 252a, b, c and d. Adhesive stripes 256a, 256b and 256c provide each of the notes with a top and a bottom adhesive stripe.

The sheet of note paper 250 includes a flexible leading edge 258 extending across the top edge region of the sheet 250. This flexible leading edge 258 allows the sheet 250 to follow the complex paper path of the typical laser printer without jamming. The flexible leading edge 258 is particularly useful when the sheet 250 is somewhat stiff.

A full sized backing sheet 260 completely covers the back of the sheet of note paper 250. This full sized backing sheet 260 is coated with a silicone release layer 261 (FIG. 11) so that it may be easily separated from the sheet of note paper 250. Referring to FIG. 11, the backing layer 260 covers over the adhesive stripes 256a, b and c, to prevent the adhesive from sticking to components on the interior of the printer. The backing sheet 260 may be perforated with perforation lines to match perforation lines 252 of the sheet of note paper. Consequently, the note paper assembly may be subdivided into two or more sections before being fed through the printer. To subdivide the note paper assembly, the user simply tears the assembly along one or more of the perforation lines 252 before printing the note. Alternatively, the user may print on the entire sheet and may separate the assembly into subsections along perforation lines 252 after the printing has been done.

As for exemplary dimensions, it is understood that the following dimensions are by way of example and not

limitation. The assembly of FIG. 10 may be 8½" wide by 11" long. The flexible leading edge 258 may be ½" in length and may extend across the entire width of the assembly. Each note 254 may be 5¼" long by 4¼" wide. The adhesive stripe 256a may be 1" long and may extend across the entire width of the assembly. The adhesive stripe 256b may also be 1" long, with ½" of the length extending across the lower edges of the notes 254d and 254c, and the other ½" length extending across the notes 254a and 254b. The adhesive stripe 256c may be ½" long and may extend across the entire width of the assembly.

FIG. 12 illustrates a further embodiment of a divisible assembly for printing message notes. A laser note assembly 280 has a paper layer 282, an adhesive stripe 284 and a backing strip 286 adhered to the adhesive stripe 284. The backing strip 286 is coated with a release coating along the surface that is adjacent to the adhesive layer 284 to allow easy removal of the backing strip 286 from the adhesive layer 284 after printing. The laser note assembly 280 is divided by perforation lines 288a and 288b into individual notes 290a, 290b and 290c. The narrow backing strip 286 is substantially the same width as the adhesive stripe 284, leaving the remainder of the back of the paper sheet 282 (which may also be referred to in relative terms as the upper sheet) exposed.

The user may utilize the laser note assembly 280 in two different ways. First, the user may feed the entire laser note assembly 280 into a printer and print onto the front and/or back sides of the laser note assembly 280. Then, after printing, the user may subdivide the assembly 280 into the individual notes 290a, 290b and 290c by tearing along perforation lines 288a and 288b. Of course, if the user wishes to have a particularly long note, the user need not divide the assembly 280 along perforation lines 288a and 288b.

Alternatively, the user may divide the laser note assembly 280 into two or more subsections prior to printing. For instance, the user may separate the laser note assembly 280 into three separate notes 290a, 290b and 290c prior to printing. The user would then feed the individual notes into a printer for individual printing.

In either case, after printing, the user will remove the backing strip 286 from the laser note assembly 280 in order to adhere the notes 290 to a substrate. For example, a user might print a family message onto one of the surfaces of laser note assembly 280, then remove the backing strip 286 and post the note onto a kitchen refrigerator or other surface for the family to read. The notes 290 may be adhered to various surfaces for a wide variety of purposes.

It is noted that the embodiment of FIG. 12 is not perfectly flat, in that the backing strip does not cover the entire back surface of the assembly 280. However, the backing strip 286 is generally very thin, between about one and three mils, and the discontinuity in thickness at the edge of the backing strip is quite small. At least five to ten note assemblies may be stacked in a typical laser printer paper tray and individually fed into the printer without jamming. It is anticipated that, in most cases, the typical user will not want to print more than five to ten note assemblies at a time.

The following dimensions are by way of example only and not of limitation. The laser note assembly 280 may be 4" wide by 9" long. Each individual note 290 may be 4" long by 3" wide. The adhesive layer 284 may be ¾" wide and the backing strip 286 may be 1⅜" wide, and both may extend across the entire length of the assembly 280. Of course, the assembly may be substantially larger for larger size notes or

so that it may be subdivided into a greater number of notes. Alternatively, the embodiment of FIG. 12 may be subdivided into two rather than three notes, with a total dimension of 4" by 10" and with each note being 4" by 5" wide.

With regard to thicknesses, the paper layer may be between 2 and 4 mils thick, the adhesive layer may be on the order of between 0.25 mil and 1 mil thick, the release coating on the backing sheet may be less than 1 mil thick, and the backing sheet may be between approximately 1 and 3 mils thick. When assembled, the assembly may be between about 3.35 mils and 8.25 mils thick.

Regarding materials, the laser note assemblies of FIGS. 10-12 may be constructed as follows. The adhesive may be an acrylic adhesive that does not become permanent over time, so that a note may be removed from a substrate long after it has been adhered thereto. The adhesive should also be temperature stable at the high temperatures generated in a laser printer or photocopier. Two such adhesives are available from Moore Corporation Limited of Toronto, Canada, through its Moore Business Forms division under the trade names Clean Tack and Clean Tack 2.

The paper layer 282 may be coated to prevent sticking if the paper is rewound onto itself during the manufacturing process. The Georgia Pacific Corporation of Pickerington, Ohio manufactures one such paper under the trade designation, Repositional C2S Basestock. The basis weight of that particular sheet is sub 20.9 lb Bond (17"x22"-500 ream size), or approximately a 50# Offset. The manufacturer applies a tie-coat to the wire side of the paper and a release coat to the felt side. The adhesive strip is then applied to the tie-coated side of the paper.

The backing strip, paper, adhesive and release coatings may be selected so that the entire assembly is repulpable and/or recyclable. Generally speaking, a suitable paper coated with a silicone release coating is recyclable and repulpable. The Moore Corporation Limited of Toronto, Canada, through its Moore Business Forms division, sells a 20# bond paper having a silicone release coating. The caliper of the paper is 3.7 mil, and the paper is recyclable and repulpable. The Clean Tack and Clean Tack 2 adhesives described above are also repulpable if used with a compatible repulping process.

The paper may be white, or may have a particular coloring, such as yellow, blue, pink or other color.

By way of example and not of limitation, the embodiment of FIG. 1 may have the following dimensions. Label sheet 20 may be a standard 8½ by 11 inch sheet. Leading edge portion 36 may be ½-inch long. Each subsection may be 4 inches wide by 5½ inches long. Each label may be 2½ inches wide by 1 inch long. Each label set 34 may be centered within a subsection, with a ½-inch border at the top and bottom and a ¼ inch border along either side. Of course, these dimensions may be substantially varied without departing from the scope of the invention.

As a further example, the embodiment of FIG. 7 may be 4¼ inches wide by 10 or 11 inches long. Each subsection may therefore be 4¼ inches wide by 5 or 5½ inches long, which is a convenient size for printing small numbers of labels.

The microperforations of FIG. 7 are shown somewhat enlarged for clarity of illustration. As noted earlier, microperforations generally have at least 35 cuts and ties per inch. The assembly of FIG. 7 may be approximately 5 to 10 mils thick, with the label layer having an approximate thickness of 4 to 6 mils, the adhesive layer being on the order of 1 mil thick, the release coating on the backing sheet being less

than 1 mil thick, and the backing sheet being approximately 2 or 3 mils thick. In general, the assembly should be no more than 15 mils thick to properly print in a laser printer. The foregoing dimensions are merely illustrative and greater or lesser thicknesses may be employed for particular applications, and the backing sheet may be of the same material as the top sheet.

It should be noted that with respect to embodiments of the present invention for printing cards, the card stock sheet may generally be as thick as 8 mils without needing to have a line of perforations inset from the leading edge to prevent jamming in the printer. It is anticipated that most card embodiments will be between 7 and 10 mils thick. In some embodiments greater than 8 mils thick, it is presently preferred to space a line of flexibility perforations approximately ½-inch from the leading edge to avoid jamming in the complex paper feed path of many laser printers and photocopiers.

With respect to the dimensions of embodiments of the present invention, modern-day laser printers generally will not print sheet sizes less than approximately 3 inches wide or less than approximately 4 inches long. However, printer technology is constantly evolving. Consequently, the present invention is not limited to these dimensions. As printers are developed that will accept sheet sizes narrower than 3 inches and/or shorter than 4 inches, the minimum dimensions of embodiments of the present invention may decrease accordingly.

Similarly, the minimum thickness of the present invention may increase as printers evolve to accept sheets that are thicker than approximately 15 mils, and the maximum width may be increased beyond 8½ inches. Additionally, new types of printers other than laser printers, ink jet printers and photocopiers may be developed in the future. Accordingly, the assemblies of the present invention are not limited to use in presently popular printers, but may be used in future types printers that will print onto subsections of a larger label or sheet assembly.

In conclusion, it is to be understood that the foregoing detailed description and the accompanying figures relate to presently preferred embodiments of the invention. Various changes and modifications may be made without departing from the spirit and scope of the invention. Thus, by way of example and not of limitation, each subsection may have any number of labels other than the three or four labels per subsection shown in the drawings. Indeed, the entire subsection could be a single large label. Similarly, the individual labels may have any of a variety of shapes, including triangular, circular, polygonal, and so on. The full size sheets may be legal sized, may be A4 size paper, or any other desired size, such as 9 inch long paper or other non-standard size sheets.

Although the embodiments described herein have featured four or two subsections, various other arrangements of subsections are possible. For instance, a label sheet may have six subsections, with three subsections on the top of the sheet and another three on the bottom of the sheet. Alternatively, the sheet could be divided into three or more narrow subsections rather than two.

Other variations are also apparent. To increase flexibility, the lines of flexibility can be perforated instead of being die cut. The perforations may extend through just the label layer and not the backing layer, or may extend through both.

If a user wishes to print more than a single subsection at once, he or she need not break the full sheet into all of the possible subsections, but can print two or more adjoining

subsections at the same time. The user can even put whole sheets of labels in a paper tray for automatic feeding if the user wants to print several labels at once.

The backing sheet in the double-thickness sheet embodiments is not necessarily coextensive with the upper sheet which is to be printed. Thus, for example, if the pressure sensitive adhesive is only applied to a portion of the upper sheet, the backing sheet need only cover the adhesive-covered portion of the upper sheet, and the upper sheet could be folded over to provide the backing sheet.

With respect to the sheet of notes, a larger number of notes may be provided than is illustrated in the figures. For instance, a subsection may include several 1½" by 2" notes, or other small dimensions, with each note having at least one adhesive stripe thereon. The subsection itself would be large enough to prevent jamming in the printer, but would be separated into the individual notes after printing. Furthermore, the note embodiments of the present invention may be made with a light cardstock or other material rather than a sheet of paper.

Accordingly, the present invention is not limited to the specific embodiments shown in the drawings and described in the detailed description.

What is claimed is:

1. An assembly for printing postable note papers in an office printer comprising:
 - a sheet of note paper having a front and a back;
 - at least one adhesive stripe area extending transversely across the back of said sheet of note paper, the back of said note paper being free of adhesive except in said at least one adhesive stripe area;
 - a sheet of removable, adhesive-free backing material covering said adhesive stripe area, said sheet of note paper being removably mounted on said sheet of backing material; and
 - at least one line of weakness dividing said sheet into separable notes;
 - wherein said adhesive is time stable and does not become a permanent adhesive over time; and
 - wherein said sheet is separable along said lines of weakness into a plurality of notes, each note having a stripe of adhesive extending along an edge thereof.
2. An assembly as defined in claim 1, wherein said sheet comprises an upper right, a lower right, an upper left and a lower left note, said upper and lower notes being separated by a first line of weakness, said right and left notes being separated by a second line of weakness.
3. An assembly as defined in claim 2, wherein a first stripe of adhesive extends along a bottom edge of said lower notes, a second stripe of adhesive extends across a top edge of said lower notes and a bottom edge of said top notes, and a third stripe of adhesive extends across a top edge of said upper notes.
4. An assembly as defined in claim 1, wherein said removable backing material comprises a strip that just covers said adhesive stripe.
5. An assembly as defined in claim 1, wherein the assembly comprises a plurality of adhesive stripes, each stripe being covered by a release strip.
6. An assembly as defined in claim 1, wherein said at least one adhesive stripe area constitutes only one adhesive stripe.
7. An assembly as defined in claim 1 wherein:
 - said assembly has only one adhesive stripe area, which extends across an edge of the back of said sheet of note paper, the remainder of the back of said paper sheet being free of adhesive;

said backing material comprises a strip of removable adhesive-free backing material that covers said one adhesive stripe area, said backing strip having substantially the same dimensions as the stripe area of adhesive, said strip being separate from said sheet of note paper; and

each note has an adhesive stripe along an edge of the note.

8. An assembly for printing postable notes comprising:

- a sheet of note paper having a front and a back;
- at least one adhesive stripe area extending across an edge of the back of said sheet of note paper, the major portion of the back of said paper sheet being free of adhesive;

- removable, adhesive-free backing material covering said at least one adhesive stripe area; and

- at least one line of weakness dividing said assembly into separable subsections;

- wherein said adhesive is time stable and does not become a permanent adhesive over time;

- whereby the assembly is separable into one or more subsections for feeding into printers such as laser and inkjet printers and photocopiers, to print said printing.

9. An assembly as defined in claim 8, wherein said sheet comprises an upper right, a lower right, an upper left and a lower left note, said upper and lower notes being separated by a first line of weakness, said right and left notes being separated by a second line of weakness.

10. An assembly as defined in claim 9, wherein a first stripe of adhesive extends along a bottom edge of said lower notes, a second stripe of adhesive extends across a top edge of said lower notes and a bottom edge of said top notes, and a third stripe of adhesive extends across a top edge of said upper notes.

11. An assembly as defined in claim 8, wherein said removable backing material comprises a strip that just covers said adhesive stripe.

12. An assembly as defined in claim 8, wherein the assembly comprises a plurality of adhesive stripes, each stripe being covered by a release strip.

13. An assembly as defined in claim 8, wherein said at least one adhesive stripe area constitutes only one adhesive stripe.

14. An assembly as defined in claim 8 wherein:

- said assembly has only one adhesive stripe area, which extends across an edge of the back of said sheet of note paper, the remainder of the back of said paper sheet being free of adhesive;

- said backing material comprises a strip of removable adhesive-free backing material that covers said one adhesive stripe area, said backing strip having substantially the same dimensions as the stripe area of adhesive, said strip being separate from said sheet of note paper; and

- each note has an adhesive stripe along an edge of the note.

15. A versatile method for preparing and printing adhesively-backed notes comprising the steps of:

- preparing a divisible note assembly as defined in claim 8;
- separating at least one of said subsections from said assembly;

- printing onto a said at least one of said subsections with a printer;

- after printing, removing the backing material from said at least one subsection; and

- after removing the backing material, adhering the subsection to a substrate.

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16. A versatile method for preparing and printing adhesively-backed notes comprising the steps of:

preparing a divisible note assembly as defined in claim 14;

separating at least one of said subsections from said assembly;

printing onto a said at least one of said subsections with a printer;

after printing, removing the backing material from said at least one subsection; and

after removing the backing material, adhering the subsection to a substrate.

17. An assembly for printing postable note papers in an office printer comprising:

a sheet of note paper having a front and a back;

adhesive stripe areas extending transversely across the back of said sheet of note paper, the back of said note

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paper being free of adhesive except in said adhesive stripe areas;

a sheet of removable, adhesive-free backing material covering said adhesive stripe areas, said sheet of note paper being removably mounted on said sheet of backing material; and

a plurality of lines of weakness dividing said sheet into separable notes, at least one of said lines of weakness extending along one of said adhesive stripes;

wherein said adhesive is time stable and does not become a permanent adhesive over time; and

wherein said sheet is separable along said lines of weakness into a plurality of notes, each note having a stripe of adhesive extending along an edge thereof.

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